The Ham Arundel News

Providing Fellowship and Community Service through Amateur Radio Since 1951

July 2018 ***39th Year of Publication***

ARRL Public Service Enhancement Working Group Chairman Updates Hamvention® Crowd on Proposed ARES Changes

At the *ARRL Member Forum* at 2018 Hamvention® last month, hosting Great Lakes Division Director Dale Williams, WA8EFK, chairman of the ARRL Public Service Enhancement Working Group, spoke about the dramatic changes that are occurring among agencies serving in the emergency/disaster response sector. He discussed planning for proposed new guidelines for participants in the ARES program, including plans for a new volunteer management software system, called *ARES® Connect* (see above). Upgrades to ARES training and resources will ensure the service continues to be a valuable partner for its served agencies into the future.

Williams' program was titled *ARES Advances into the 21st Century -- A New Program, A New Mission.* The vision is for an ARES that is comprised of *organized, trained, qualified,* and *credentialed* Amateur Radio operators who can provide public service partners with radio communications *expertise*, *capability*, and *capacity*.

Goals include aligning the ARES organizational structure with the National Incident Management System (NIMS) and Incident Command System (ICS). The Emergency Coordinator (EC) will continue to lead the ARES team locally during an incident, while the District EC and Section Emergency Coordinator will continue to serve as resources and support for the EC. *ARES Connect* is the new platform designed to support *Reporting, Membership, Database - Portability, Record Keeping, and Statistics*.

It is envisioned that additional training will be mandated, including ARRL Emergency Communications courses and the now standard FEMA NIMS/ICS courses IS-100, 200, 700, 800, with IS-300 and 400 for higher levels. Other specialty courses will be required in certain cases such as SKYWARN and other agency-specific training.

Levels of training attained would dovetail with three new levels of participation: Level One would be comprised of all entering the program with no training, while progressing through the ARRL emergency communications training and the FEMA Independent Study courses 100, 200, 700, and 800. Level Two would be attained upon successful completion of these courses, and would be considered the "Standard" level for ARES participants. Level Three would be attained upon completion of the advanced FEMA courses IS 300 and 400, which would qualify candidates for the ARES leadership positions EC, DEC, SEC and Assistants.

Level One participants would be able to fulfill most ARES duties with the target of attaining Level Two in one year. Level Two would be considered the normal participant level, which would gain the participant access to most incident sites and EOCs. Level Three would convey full access as granted by the Authority Having Jurisdiction (AHJ), and qualification for ARES leadership.

It is proposed that ARRL will provide a basic ARES ID, which would convey recognition of registration with ARES nationally and indicate level of training. No conveyance of site access is guaranteed. The AHJ would grant an additional ID/pass for site access, which would be "owned" by the AHJ.

What is Happening Now

The ARES Connect system is currently being field-tested and implemented, with ARRL HQ staff undergoing training in its administration, and group registrations currently being made. Group IDs are being assigned. Beta testing with four ARRL Sections with large ARES organizations is underway.

The plans as described above are pending approval by the ARRL Board of Directors. An *ARES Strategic Plan* for the ARRL Field Organization, and an Introductory Announcement are being drafted. Editing/updating ARRL ARES-related publications is underway.

A full article on the ARES enhancements, once approved, will appear in September *QST*.

Used with permission The ARES E-Letter for June 20, 2018

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FREE CERT TRAINING AVAILABLE IN THE DC AREA

Community Emergency Response Team (CERT) training via Homeland Security and Emergency Management Agency (HSEMA) and UCC will hold CERT training on July 10, 12, 17 and 19.

You may register at https://volunteer.dc.gov/pages/pages/108. Participants can apply to any time up to two weeks before the start of the course. Acceptances will be sent prior to the start of the course.

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FEMA's Email Subscriptions: Treasure Trove of Resources and Info

FEMA, the Federal Emergency Management Agency and formal partner agency of the ARRL, offers a wealth of information, updates and alerts on a wide range of emergency and disaster response topics by *email subscription*. These topical advisories and alerts are relevant to ARES participants, and readily subscribed to by clicking here. Simply subscribe by checking the boxes; unsubscribe by un-checking the boxes. Access your subscriber preferences to update your subscriptions or modify your password or email address without adding subscriptions.

Subscribers can opt to receive FEMA declarations, such as Emergency Declarations, Fire Management Assistance Declarations, Major Disaster Declarations, Disaster Updates by FEMA regions of the country, and Updates During Disasters.

Featured FEMA Updates include registration information and updates for *America's PrepareAthon*, which motivates people and communities to take action to prepare for and protect themselves against disasters. ARRL has supported the preparedness program, and since 2003, has been an affiliate of Citizen Corps, under the four charter Citizen Corps programs--Neighborhood Watch, Volunteers in Police Service, Community Emergency Response Teams and Medical Reserve Corps. Get updates on 2018 *America's PrepareAthon* plans.

Subscribers can also receive Citizen Corps News and Updates during disasters, and updates on the Community Emergency Response Team (CERT) program.

For information on the Department of Homeland Security's Center For Faith-Based & Community Initiatives, and Neighborhood Partnership, check the relevant box.

FEMA's Emergency Management Institute's mission is to train, exercise and educate to improve the competencies of Emergency Management at all levels. The EMI is home for FEMA's well known Independent Study (IS) program, where ARES participants and others can take the NIMS and ICS (and numerous other topics) online courses. Email subscribers can receive a wide array of EMI news and updates, including on the Independent Study courses.

Other news and updates are available on topics such as HAZMAT, IT, Mitigation (Grants Policy), Communications and Outreach, Risk Analysis Branch, and, of course, the National Incident Management System (NIMS). Emails are available for the FEMA National Level Exercise, National Response Framework, FEMA Daily Operations Briefing, and much more.

I've been an email subscriber for many of these update and bullletins for several years now -- I highly recommend them. -- *K1CE*

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The Not-A-Contest Contest

It's been said that Field Day is an operating event, not a contest. But many take Field Day very seriously, in whatever dimension they find most interesting, such as most transmitters on the air, best BBQ, fastest setup time, highest ratio of potato salad to contacts made. Deciding on what your Field Day adventure is going to be is part of the fun. In the traditional contesting sense, it's all about making a high score. I spoke with Rob, N7QT, who along with Brian, N7RVD, placed fourth overall in the 1B2 category for in 2014 operating portable from Table Mountain in Eastern Washington. They had a K3, CrankIR vertical, wire antennas and a Cushcraft 3 element Yagi. Rob and Brian had operated ARRL Field Day from that location, which provides over 6000 feet of elevation, and a low-noise environment.

"Our operation was casual - we had an enjoyable camping experience, and we also operated Field Day. The camping experience included preparing and eating meals together, and enjoying our beautiful Pacific Northwest location. As a result we didn't score as highly in the results as we would have liked, so we decided to analyze how we could have done better in preparation for the 2015 FD contest. We decided to approach Field Day as we'd approach any regular contest. It was all about keeping the radio busy making contacts that earned the most points. We made the following changes in 2015:

1. We prepared our meals ahead of time and ate separately, agreeing that we would not let the radio be idle
2. We changed location to one that gave us better coverage of the entire US
3. While we both prefer CW, but when we'd run out of CW contacts in the middle of the night, we'd switch to SSB. It's like fishing - when nothing is happening, try something different
4. Brian and I complemented each other; I am more a night person, and he can just crank out the Qs during the day, so we operated to our strengths during the contest.

We came in first place in the 1B2 category in 2015 as a result of our operating changes."

Used with permission The ARRL Contest Update for June 13, 2018

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SPECIAL NOTICE

As of June 2, 2018, the FCC has given

Tony Young's call sign, WA3YLO,

to his son, Kevin Young.

Long live WA3YLO !!!

Maryland Launches “Know Your Zone” Hurricane Preparedness Campaign

June 14, 2018

Program Designed to Ease Evacuation in Areas Subject to Tidal Floods, Surge

REISTERSTOWN, Md. (June 14, 2018) — With the record-setting 2017 hurricane season still fresh in most American’s minds, the Maryland Emergency Management Agency (MEMA), in conjunction with local emergency managers, is rolling out a new hurricane and severe weather evacuation system as a result of the Maryland hurricane evacuation study which concluded earlier this year. The study identified 3 large areas in Maryland subject to tidal flooding. *Know Your Zone* aims to bring awareness of the evacuation zones to the forefront of Marylanders’ summer plans and make evacuation notices easier to disseminate.

The National Oceanic and Atmospheric Administration recently released its forecast for the upcoming season and predicted near- to above-normal activity. However, it only takes one storm hitting the mid-Atlantic area to seriously affect Maryland.

“As experts are forecasting an active Hurricane season this year, I strongly encourage all Marylanders to be proactive, prepared, and to *Know Your Zone*,” said Governor Hogan. “We are all too familiar with the devastating impacts of severe weather and flooding, so remain vigilant, spread the word to your friends, family, neighbors and let them know about the importance of this potentially life-saving initiative.”

Residents of and visitors to Maryland are encouraged to visit the new interactive *Know Your Zone* web page, www.KnowYourZoneMd.com, where they can learn more about the project. On that page, you can type in an address and quickly find out what zone, if any, the property is located in.

The first year of the program will encourage Maryland residents to know the evacuation zone of their residence, business or vacation site. The zones are designated by letters **A**, **B** and **C**.

Zone **A** areas are the most likely to be impacted by severe flooding in the event of a major storm or hurricane. In future years, the program will focus on refining evacuation routes away from the affected areas. “Proper and timely messaging for evacuations saves lives,” said MEMA Executive Director Russ Strickland. “This new system is designed to make it easier for local emergency managers to evacuate areas by encouraging Marylanders to *Know Your Zone* before a storm hits.”

The three evacuation zones only affect areas subject to tidal flooding or storm surge – communities at or near the Atlantic Ocean, the Coastal Bays, and the Chesapeake Bay and its tributaries. That covers 16 Maryland counties along with Annapolis, Baltimore City and Ocean City.

“Hurricane Sandy in 2012 was a wake-up call for the mid-Atlantic region; it could have been Maryland,” said Strickland. “Working with local and federal partners, and using technology that until recently was not available, we studied updated flooding and surge patterns caused by more powerful storms to develop these new evacuation plans.”

If local officials feel an evacuation is needed to protect lives, they will issue the order by zones instead of having to define specific geographic areas. This program is similar to one rolled out last year in neighboring Virginia.

The Atlantic hurricane season runs from June to November. Hurricanes can cause strong winds, heavy rain, inland flooding and other severe weather, but residents in Maryland can be prepared by ensuring they know how to receive a warning, have a plan, practice safety tips and know their evacuation zone.

It is important to remember Maryland can see hurricanes and impacts from a storm hundreds of miles away. Hurricanes can produce 150-plus miles per hour winds, tornadoes and tremendous flooding from both tidal surges as well as torrential rain

Residents can also take the following actions to remain safe:

- Build an emergency supply kit and develop a family emergency and communications plan.
- Stay tuned to trusted sources such as the National Weather Service and local broadcasters for official weather information.
- Follow instructions and advice given by emergency officials, especially instructions related to evacuation.
- During severe weather, stay indoors away from windows, close all interior doors, and brace external doors. If you live near the shore or coast, expect the storm tide will inundate your home.
- Monitor NWS flood warnings for your area and be prepared to seek higher ground. Flooding is often our biggest threat.
- Fill a bathtub or other large container with water for sanitary purposes such as cleaning and flushing toilets.
- Charge electronic devices before bad weather hits and consider keeping a charger in your car.

Additional preparedness information can be found on MEMA’s website at mema.maryland.gov. Residents can download the free MARYLAND Prepares mobile app. They can also follow MEMA on Twitter or on Facebook.

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National Hurricance Center's WX4NHC Station Test Successful

Julio Ripoll, WD4R, Assistant Coordinator for the National Hurricane Center's amateur station WX4NHC in Miami, Florida, reported a highly successful annual test event, and thanked all who supported it so enthusiastically.

WX4NHC operators conducted its annual station test on Saturday, May 26, 2018 from 9AM-5 PM EDT (1300Z-2100Z). It marked the station's 38th year of public service at the NHC. The purpose of this event was to test station equipment, antennas and computers prior to this year's Hurricane Season, which started at the beginning of this month and runs through November 30th. This event is good practice for ham radio operators worldwide, and helps NWS offices across the country become familiar with Amateur Radio communications support services available during times of severe weather.

New National Hurricane Center Director Ken Graham, WX4KEG, left, special guest operator at WX4NHC for last month's annual station test, with station Assistant Coordinator Julio Ripoll, WD4R. (*photo courtesy WD4R*)

Ripoll said "We had a very successful on-the-air test. All of our radios and antennas worked well (HF, and VHF/UHF systems)." He added, "Even with our equipment maintenance and software updates, we were able to make more than 150 contacts nationwide, including with stations in the Caribbean and South America." A few dozen contacts were made on the EchoLink Hurricane Practice Net.

Ripoll offered special thanks to Rob Macedo, KD1CY, and the VoIP Hurricane Net team.

Several contacts were made on the Florida SARNET, which links over 25 UHF repeaters statewide, including many EOC offices. Dozens of weather reports were also received from stations using HF Winlink.

ARES Activates for Wide Area Flooding in Maryland; Severe Damage in Ellicott City

The National Weather Service predicted and alerted via WEA (wireless emergency alerts) and NOAA weather radio of flood warning across numerous locations in Maryland and the District of Columbia that occurred on Sunday, May 27th. As many watched Hurricane Alberto, radio amateurs in Maryland watched more and more rain locally.

By 5 PM heavy rain, as much as 8" to 10" soaked portions of central and southern Maryland. And again, much like 2016, flooding with heavy damage occurred in historic downtown Ellicott City. Other areas also impacted were the cities of Arbutus, Dundalk, and Catonsville. Perry Hall and Patapsco State Park needed emergency high water rescues.

While other Maryland jurisdictions received less rain, upstream flooding continued to flow into the western area along the Chesapeake Bay through Southern Maryland. ARRL Maryland-DC (MDC) Section radio amateurs monitored media and checked the civilian APRS weather stations for added situational awareness.

The MDC Section Manager, Marty Pittinger, KB3MXM, was monitoring these conditions when he received several notifications from local radio amateurs of serious flooding occurring in numerous locations. SM Pittinger immediately contacted his section staff and decided by 6:30 PM to activate ARES in eight counties of central Maryland. Anne Arundel, Prince Georges, and Howard Counties covered the majority of flood affected communities. The Frederick County ARES Emergency Coordinator offered mutual aid if needed.

Maryland Governor Larry Hogan declared a State of Emergency at 7 PM. Fifteen minutes later more than 40 ARES operators reported to their respective 2-meter nets in five counties.Then, Pittinger contacted Section Traffic Manager Al Nollmeyer, W3YVQ, to alert him of the potential need for NTS traffic handling support.

Pittinger maintained contact with Section Emergency Coordinator Jim Montgomery, WB3KAS, Assistant SM Wanda Montgomery, KA3AHI, Assistant SM for External Affairs and Public Information Coordinator Ken Reid, KG4USN, Assistant SM Allen "Brownie" Brown, KZ3AB, and ARRL Atlantic Division Director Tom Abernethy, W3TOM. These communications continued throughout the evening.

Operators provided radio communications covering an area of 70 x 80 miles or more than 5600 square miles for six counties.

ARES Net Control designated a station to monitor MDC EchoLink *WASH_DC*. HF 80-meter NVIS coverage was also verified usable. Other radio operators enlisted SKYWARN® information, and announced NOAA NWS warnings.

Regular situational awareness updates were shared throughout the nets to ensure communication readiness for served agencies, community leadership, neighbors, first responders and fellow radio amateurs. SM Pittinger had early evening contact with the Maryland Department of Health Service, part of the Maryland Emergency Management Agency (MEMA).

Through email and phone correspondence, the MDC Section was alerted to a potential activation of Emergency Support Function (ESF) #6 and the need for ancillary radio communication support. Many county EOCs in affected areas were also activated. [ESF #6 coordinates the delivery of Federal mass care, emergency assistance, housing, and human services when local, tribal, and State response and recovery needs exceed their capabilities.]

Anne Arundel County ARES and Howard County ARES were in communication with their local emergency management agencies and were both told to stand by in case of need.

Cellular, commercial and private radio systems continued to function properly without much congestion or outages during the heavy weather. Local media outlets provided continuous coverage. There were reports of road closures, power and natural gas outages, and flooded roads.

The MDC ARES teams continued their vigilance until 10:15 PM, Sunday, May 28, 2018. Through the use of

Amateur Radio's VHF, UHF, and HF capabilities, voice, data and CW, messaging and networking of ARES teams consistently demonstrates their abilities, training and readiness to respond quickly, at any time - "We are always ready." -- *Ken Reid, KG4USN, ARRL Assistant Section Manager for External Affairs and Public Information Coordinator, ARRL Maryland-DC Section*

Used with permission The ARES E-Letter for June 20, 2018

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Sailor Grateful for Maritime Mobile Service Network Assistance

Phoenix sailor and radio amateur Timothy Henning, KE7WMZ, has expressed his gratitude to the Maritime Mobile Service Network (MMSN) for intercepting and handling his distress call on 14.300 MHz. Net control operator Harry Williams, W0LS, caught Henning's call requesting assistance with an urgent medical condition on May 23. Henning, some 200 nautical miles south of Ensenada, Mexico, in his sailing vessel *Victory Cat*, reported that a severe vision problem had developed in his right eye, and he was seeking immediate medical attention and advice.

Williams contacted the US Coast Guard in Alameda, California, relaying all information concerning the medical problem and staying on the air with Henning for several hours. The Coast Guard, in turn, relayed the information to the on-duty flight surgeon who advised that Henning seek immediate medical attention at the closest port of call.

It was decided that Henning would continue on to Ensenada, and the Coast Guard arranged to have someone meet him there and transport him to the Balboa Naval Hospital in San Diego, while his wife stood by with the vessel at the dock.

Tim Henning, KE7WMZ, aboard *Victory Cat* near Greece.

Ultimately, it was determined that Henning had a detached retina, and he was transported to Phoenix for surgery.

"I appreciate, beyond words, that the Maritime Net was able to help us get in contact with the USCG and simply be at the other end of the HF radio, helping us through a challenging time," Henning told the MMSN afterward. "I especially want to thank Harry, W0LS. He was extremely professional and invaluable in linking us effectively with the USCG. We were just completing our 10 years round-the-world sail voyage."

The Maritime Mobile Service Net operates daily on 14.300 MHz from 1700 UTC to 0200 UTC. It is celebrating its 50th anniversary this year.

Used with permission The ARRL Letter for June 14, 2018

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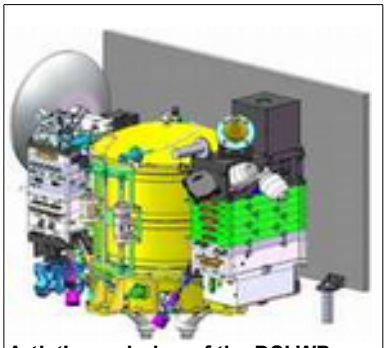
Reception Reports Requested as Amateur Radio Heads to the Moon

China launched two microsatellites into a lunar transfer orbit on May 20 in conjunction with the Chang'e 4 mission to the far side of the moon. The *Longjiang-1* (LJ-1) and *Longjiang-2* (LJ-2) microsats were secondary payloads on the launch, piggybacking on the *Queqiao* relay satellite. Also known as DSLWP-A1 and DSLWP-A2, the satellites were maneuvered onto a track to the moon, but LJ-1 then appeared to have encountered problems, and Harbin Institute of Technology, which developed the satellites, was asking for help from the world Amateur Satellite community.

The May 20 launch of LJ-1 and LJ-2, which piggy-backed on the Queqiao relay satellite.

"We lost contact with Satellite A on S band after an orbit adjustment," Wei Mingchuan, BG2BHC, of Harbin Institute of Technology said. "We just tried to switch on UHF, but we don't know if it works or not." He said on 435.425 MHz, the satellite should alternate between 500 bps GMSK and JT4, while the 436.425 MHz signal should be 250 bps GMSK. Both transmit once every 5 minutes. LJ-1 and LJ-2 also will test low-frequency radio astronomy and space-based interferometry. The astronomy objectives of the two spacecraft are to observe the sky at the lower end of the electromagnetic spectrum -- 1 MHz to 30 MHz -- with the aim of learning about energetic phenomena from galactic sources, using the moon to shield them from earthbound radio signals. The Chang'e 4 mission will mark the first-ever attempt at a soft landing on the far side of the moon.

Signals from the DSLWP satellites were received after launch by radio amateurs in Brazil, Chile, and the US, as well as by many others around the world. Each satellite carries VHF/UHF SDR transceivers for beacon, telemetry, telecommand, and digital image downlink. Onboard transmitting power is about 2 W.



Artist's rendering of the DSLWP spacecraft.

The *Queqiao* communications relay satellite is required for the lunar far-side landing to facilitate communication with a not-yet-launched lander and rover, because the moon's far side never faces Earth, and some significant scientific measurements from the dark side of the moon require real-time contact with Earth. *Queqiao* was developed by the China Academy of Space Technology (CAST).

Used with permission The ARRL Letter for May 31, 2018

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Repeaters and Nets

2 Meter Repeaters

Location	Frequency	Tone	Notes
Davidsonville	147.105+	107.2	AARC Repeater with morning traffic net.
Glen Burnie	147.075+	107.2	AARC repeater Located in Northern AA County.
BrandyWine	147.150+	114.8	SMARC Repeater.
Prince Frederick	145.350-	156.7	SPARC/CARC Repeater.
Laurel	147.225+	156.7	Laurel ARC Repeater.
Millersville	146.805-	107.2	Repeater.

1.25 Meter Repeaters

Location	Frequency	Tone	Notes
Davidsonville	223.880-	107.2	AARC 1.25M repeater *check to see if tied into 7.105...
Millersville	224.560-	107.2	AARC repeater Located in Northern AA County.

70cm Repeaters

Location	Frequency	Tone	Notes
Davidsonville	444.400+	107.2	AARC 70 cm Repeater.
Annapolis	442.300+	107.2	AARC 70 cm repeater
Laurel	442.500+	156.7	Laurel ARC 70 cm Repeater.
Millersville	449.125-	107.2	Maryland Mobileers Repeater.
Upper Marlboro	443.600+	103.5	SMARC 70 cm Repeater.

Packet Stations

Location	Frequency	Call	Notes
Davidsonville	145.050	W3VPR	AARC Club packet node running JNOS
Davidsonville	145.010	W3VPR-5	Digipeter Relay to EOC Winlink
Millersville	145.010	W3AAC-5	Digipeter Relay to EOC Winlink
Glen Burnie	145.010	W3AAC-10	EOC Winlink system and digipeter

Amateur Radio nets

Name	Frequency (in Mhz)	Day	Time
Morning Commuter Net	147.105+ PL 107.2	Weekdays	0600
AARC Talk Net	147.105+ PL 107.2	Wednesday	2000
AA County ARES Net	146.805- PL 107.2	Sunday	2000
Baltimore Traffic Net	146.670-	Daily	1830
Boating Net	146.805- PL 107.2	Wednesday	1930
Maryland Emergency Phone Net	3.920	Daily	1800
Maryland-DC-Delaware Traffic Net	3.643	Daily	1900 and 2200
Maryland Slow Net	3.563	Daily	1930
React Net	442.300+ PL 107.2	1st Sunday	1930

We use **simplex 146.430 Mhz** frequently enough that you should probably program that into your HT or mobile. This is the go-to frequency for many 5K race/walk volunteering efforts, local communication, Field Day setup, and the like when we're not using a repeater.

A HF "GO" Kit For Portable Use.

By Ike Lawton W3IKE/K3ZQ

I'd like to say it was a dark and stormy evening that made me start a "Go" kit project but it wasn't. I received an email from Waterway Radio and Cruising Club (www.waterwayradio.net) Past Commodore Larry Shick, KG6CYP, about the use of my remote for his 0745 net control slot on Saturdays when he was going to be in Maine this summer. At the time I couldn't guarantee it would be operational as we are moving to downsize. In lieu of the remote I suggested I could put together a compact portable 100 watt station including a 33 foot vertical antenna and have it take up just a few cubic feet of space in the rental car they will drive to take to Maine from Annapolis. The unit also needed to be small enough so it could be easily stored on Larry's Valiant 42 sail boat.

The approach I used was to purchase a used Yaesu FT-450 with optional internal automatic antenna tuner at a local Hamfest then build the kit around it. It is very important that the radio used have an internal automatic antenna tuner so the system will have maximum transmit efficiency at all times.

I already had a case that was previously used for electronic tool kit storage. The case was easily converted to hold the radio, power supply and ancillary items such as DC power cable, mic and manuals.

The next thing to do was to find a compact 25 amp power supply that was small and noise free. The MFJ model 4125 fit the bill so I found a good used one on eBay. Here is what the packed kit looks like.

Next was the antenna portion of the kit. This took a little planning as I wanted a full quarter wave 33' vertical with radials so grounding would not be needed. I already had the antenna which is an Eagle One (http://www.w8afx.com/) vertical which collapses to 50 inches. The next thing that was required was to pack the complete antenna kit in a bag that is around 50 inches long. As it turns out there are many fishing pole caring bags on eBay that fit the bill for under $15. Most of the other items in the antenna kit were purchased on eBay with the exception of the steel fence post which came from Home Depot and the 4 pound hammer that was sourced from Harbor Freight.

The standard Home Depot steel post was modified by pointing the earth end and shorting the top end with a hacksaw. Here is a picture of the post driven in the ground about 18" and the clasped antenna attached by stainless steel hardware from my local True Value store.

Here is what the antenna kit looks like.

The next thing to do is extend the Eagle One to its full length, attach four 25' radials and the 50 foot coax lead with a common mode choke to prevent stray RF from entering the coax braid and inducing RF back into the radio thereby distorting the audio. The choke is made of 8 to 12 snap on ferrite beads purchased from an eBay vendor and covered with 1.5 inch heat shrink tubing to hold them in place. Here is what it looks like ready to use on 40 meters.

Since that test in my back yard I have delivered the "GO" unit to Larry and set it up at his temporary location in Annapolis. As of the morning of June 21, 2018, the unit and antenna are working well and will see service on the net both from Annapolis and Maine this summer.

Here is what it looks like ready to use on 40 meters.

Here is a closer look at the radial attachment and coaxial feed attachment.

This is a picture of the first test of the system with Tom Rader, K4WJC and Dick Giddings W3RDT after the net.

So what did it cost? Here is a breakdown:

Yaesu FT-450 with internal tuner (Used)	$375.00
MFJ-4128 power supply (Used)	$55.00
Equipment and antenna Case (Used)	$25.00
Eagle one antenna (New)	$200.00
Home Depot steel post (New)	$8.00
50' RG-8 Coax with connectors (New)	$28.00
100' Radial wire (New)	$28.00
Ferrite beads and shrink-wrap (New)	$15.00
4 Lb. hammer (New)	$9.00
Miscellaneous SS hardware, etc.	$35.00
Total	**$778.00**

Is The Internet, Millennials Or FT-8 Killing Ham Radio?

By Dan Romanchik, KB6NU

Amateur radio bloggers love to write about the demise of amateur radio. To wit, we have:

- K0NR's Is the Internet destroying amateur radio? (http://www.k0nr.com/wordpress/2017/11/internet-destroying-amateur-radio/)
- N0SSC's Millennials are killing ham radio (http://n0ssc.com/posts/583-millennials-are-killing-ham-radio)
- PE4BAS' Is FT-8 damaging amateur radio? (https://pe4bas.blogspot.com/2018/04/is-ft8-damaging-hamradio.html)
- NZ0T's Did Joe Taylor K1JT Destroy Amateur Radio? (http://www.ei5di.com/jt.html)

Of course, none of these posts are really saying that the internet, millennials, or FT-8 has killed amateur radio. What they are saying is that all of these are changing amateur radio as we know it. Well, duh, the way we live our lives changes every day. Why should amateur radio be any different?

For example, Bob, K0NR, discusses how the operation of remote stations is changing the game of DX. Can you really claim that you worked a DX station if you rented time on a super station? I've written about that topic, too (https://www.kb6nu.com/dx-advisory-committee-wants-to-put-the-screws-to-remote-operation/).

There has also been much written about how FT8 is changing the amateur radio game. One blog post (https://ve7sl.blogspot.com/2017/10/160m-ft8-end-of-era.html), talking about the effect of FT8 on 160m operation, even goes so far to say that this is the "end of an era." On DX World, the results of the poll, "FT8 – Damaging to Amateur Radio?" (https://dx-world.net/yes-or-no-a-poll-on-ft8/) show more than half of the respondents think that FT8 is damaging amateur radio.

I specifically used the word "game" in the previous two paragraphs because that's exactly what's changing. The physics of amateur radio certainly isn't changing. Our transmitters are still generating electromagnetic waves like they have been for decades, and on the HF bands, anyway, those radio waves are bouncing off the ionosphere just as they have been for more than the past 100 years.

What's changing is the human component. By that I mean what's changing is how we think people should participate in the hobby. The hams that are complaining that the internet or millennials or FT8 is killing amateur radio are really just complaining that people aren't participating in amateur radio the way they want them to participate.

Here's where we talk about millennials. In his blog post, Sterling, N0SSC, suggests that setting up remote stations is one way to engage young people. He writes, "I believe that remote operating, and other internet-assisted means of ham radio operation, are critical to youth engagement."

He's also big on an idea he calls "ham radio hackathons." He writes,

"A hackathon isn't a coding competition. It's explained well in this Medium article (https://medium.com/hackathons-anonymous/wtf-is-a-hackathon-92668579601). It goes even further than that, not limited to coders and engineers, but open to thinkers, doers, philosophers, system engineers, math people, teachers, students, artists, stakeholders…anyone with an interest in **solving a problem with technology."**

I support both of these ideas, but I think that millennials (and, to be fair, it isn't just millennials we're talking about here, but any newcomers to the hobby) need to step up and get these things going. I don't think it's my job to try to get kids interested in amateur radio. I don't even know if that's really possible. What I can do, however, is be there to encourage and support kids (and anyone else that expresses a sincere interest in amateur radio).

For example, I'm not sure how fruitful it would be to set up my station to be remotely operable and then saying to some kids, "Hey, come and operate my station." What I think would be more fruitful is to say to a kid, "Hey, come help me set up my remote control station, so that we both can use it." Then, it turns into a learning situation, and we both gain from the exercise.

The same kind of thing has to happen with ham radio hackathons. The motivation has to come from the ground up, not the top down. I do hope that this idea gets off the ground, though, and I'm standing by, ready to support this effort however I can.

I think that millennials (I'm really getting tired of that term, by the way) need to grab the bull by the horns and take amateur radio in the direction they want it to go. Feel free to kill amateur radio as we know it. Make it better!

When he's not trying to figure out how to save amateur radio, Dan builds stuff, blogs about amateur radio at KB6NU.Com, teaches amateur radio classes, and operates CW on the HF bands. Look for him on 30m, 40m, and 80m. You can email him about what you think is killing amateur radio at cwgeek@kb6nu.com.

Used with permission

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Letters: Fireman's Rule on HAZMAT Incidents

In re your article on HAZMAT responses in the April issue of the ARES E-Letter, I'd like to add that the Fireman's Rule of Thumb (pun intended) ensures that you're a safe distance from a HAZMAT incident:

If your extended thumb arm's length does not cover a HAZMAT scene, you're too close. If your thumb covers the scene you're between 1/4 and 1/2 mile away.

I keep an inexpensive monocular in the vehicle to read a HAZMAT placard from a safe distance. The Emergency Response Guide is available for an Android or iPhone here. The price is right - free - which fits all budgets.

-- *Lew Wallach, N9WL, Albuquerque, New Mexico*

Used with permission The ARES E-Letter for June 20, 2018

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AARC Mesh Networking Group
1:00 to 4:00 PM monthly,
on the 3rd Sunday of the month
AARC Clubhouse, Davidsonville, MD
(Next Meeting will be July 22, 2018)

ARRL Drone Transmitters Complaint Spurs Proposed $2.8 M FCC Penalty

In the wake of an investigation resulting from a 2017 ARRL complaint, the FCC has proposed fining HobbyKing and associated entities $2.8 million for apparently marketing noncompliant RF devices and failing to comply with Commission orders. According to a June 5 FCC *Notice of Apparent Liability* (*NAL*), HobbyKing appears to have sold audio/video (A/V) transmitters intended for use with unmanned aircraft, such as drones, in some instances marketing them as Amateur Radio equipment.

"The Enforcement Bureau previously issued a *Citation* notifying HobbyKing of its legal and regulatory obligations and ordering it to cease and desist from marketing noncompliant equipment," the FCC said in the *NAL*. "Additionally, the Bureau issued a *Citation* against HobbyKing for failing to fully respond to a *Letter of Inquiry.* Despite these *Citations*, HobbyKing has continued its apparently unlawful practices."

HobbyKing had denied that it was marketing its drone transmitters to US customers, but ARRL's January 2017 complaint pointed out that ARRL Laboratory Manager Ed Hare, W1RFI, was able to purchase two drone transmitters from HobbyKing and have them shipped to a US address for testing in the Lab.

In his 2017 letter to the FCC Spectrum Enforcement Division, ARRL General Counsel Chris Imlay, W3KD, described the transmitters as "blatantly illegal at multiple levels," and noted that they used frequencies intended for navigational aids, air traffic control radar, air route surveillance radars, and global positioning systems and not Amateur Radio frequencies, as the marketer had purported.

ARRL told the Enforcement Bureau in 2017 that the devices "represent a real and dangerous threat to the safety of flight, especially when operated from a drone platform that can be hundreds of feet in the air." Hare and ARRL Lab staffers Mike Gruber, W1MG and Bob Allison, WB1GCM, tested the units. Imlay credited ARRL Central Division Director Kermit Carlson, W9XA, and the Electromagnetic Compatibility Committee he chairs, for calling attention to the issue and prompting ARRL's action.

In a related news release this week, the FCC said that while HobbyKing represented that its transmitters operated in designated Amateur Radio bands, the Commission's investigation uncovered that 65 models could also apparently operate outside of the ham bands. The FCC noted that Amateur Radio equipment used to telecommand model craft are limited to 1 W (1,000 mW), but three transmitters included in the *NAL* "apparently operate at significantly higher power levels of 1,500 mW and 2,000 mW."

"The Commission generally has not required amateur equipment to be certified, but such equipment must be designed to operate only in frequency bands allocated for amateur use," the *NAL* said. "If such equipment can operate in amateur and non-amateur frequencies, it must be certified prior to marketing and operation." The FCC also said in its *NAL* that consumers who own such HobbyKing devices "should cease using them immediately or risk enforcement action."

This week, the FCC also issued an *Enforcement Advisory* cautioning that drone transmitters must comply with FCC rules in order to be marketed to customers in the US, and that operators must comply with FCC rules.

In its 2017 complaint, ARRL cited the Lawmate transmitter and its companion 6 W amplifier as examples of problematic devices being marketed in the US.

"However, many A/V transmitters that purport to operate on amateur frequencies also operate on frequencies that extend beyond the designated amateur frequency bands," the advisory said. "If an A/V transmitter is capable of operating outside of the amateur frequency bands, it cannot be advertised, sold, or operated within the United States without an FCC equipment certification. Individuals without an amateur license may not use such radio equipment, if it is designed solely for use by amateur licensees."

Imlay said the FCC action addressed "another of many instances in which unscrupulous importers import and market products in the US touted as Amateur Radio equipment but actually marketed to the general public, and which, in this case, have a high potential for abuse and interference to other radio services and to radio amateurs." Imlay characterized the FCC *NAL* as an important "line in the sand" aimed at keeping companies from encouraging the general public to use the amateur bands without a license.

Used with permission The ARRL Letter for June 6, 2018

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Hams in any area affected by inclement or severe weather are reminded to check the health and welfare of their neighbors, especially those that are handicapped or are elderly.

It is advisable to have your emergency services contact information available.

Keep it updated and near at hand.

AARC STAFF – 2017

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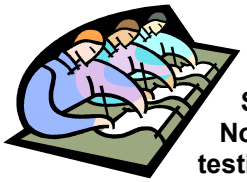

VE Testing Schedule

Second Saturday of each month – Noon – AARC – Rick Steer / AB3XJ **testing@w3vpr.org**

Third Saturday of each month – 9AM – Laurel ARC **–** John Creel, 301-572-5124
Fourth Tuesday of each month – 6PM – MMARC – Mike Montrose / KA2JAI 443-310-4907 web site is tinyurl.com/marylandmobileers

To all exams bring:

- Picture ID
- Social Security Number or FCC Registration Number (FRN)
- **ORIGINAL** and a **COPY** of current FCC amateur radio license
  ORIGINAL and a COPY of all element credits (eg., FCC letters, old licenses or unexpired Certificates of Successful Completion of Examination-CSCE)

Ambitious Arizona STEM Planetary Rover Project is a Winner

An Amateur Radio-based science, technology, engineering, and mathematics (STEM) initiative at an Arizona elementary school culminated on May 22, as youngsters competitively deployed their own radio-controlled rovers to explore a simulated planet set up in the Sonoran Desert. Following in the footsteps of NASA scientists, 25 pupils at Bouse Elementary School -- several already holding ham radio licensees -- took part in the APS Arizona Rover Project, which is aimed at promoting STEM subjects through Amateur Radio and preparing young participants to earn an Amateur Radio license.

"It was awesome!" said Dave Anderson, K1AN, the president of My La Paz, which sponsored the project in cooperation with Arizona Public Service (APS) and community volunteers. The nonprofit My La Paz promotes health, education, and community in La Paz County. "The youth all had the chance to explore the artificial planet, the event was well attended, and the radio links for remote control and video were rock solid."

Anna Dautel, KI7WOJ (right), and Skyla Herman, KI7WPC, pose with one of the 20-some rover prototypes. The rover is a dual-motor small tank chassis running off 6 V worth of AA batteries. Remote control of each rover is accomplished by using dual-tone multi-frequency signal tones from their radios.

The APS Arizona Rover project was part of a 5-month-long in-curriculum education program at Bouse Elementary that Anderson hopes to expand to other schools in La Paz County.

"Its primary goal was to lift up and inspire the youth into science and learning via instruction and exploration of radio science, Amateur Radio, and space research," Anderson told ARRL. "The goals of the program were to deliver science instruction that met and exceeded Arizona Common Core educational guidelines and to help the youngsters prepare to attain their Amateur Radio licenses."

Anderson said 23 students got their Technician licenses while also learning and developing electronic circuits, breadboarding, and more within the school day.

Leading up to launch day, participants were challenged to complete different missions using only Amateur Radio technology for remote control, data, and video feeds. In a matter similar to what the Mars Rover scientists do, the students had to complete these missions from a remote location without actually being able to see their robots. Rovers competed in several categories. These included completing specific objectives remotely from mission control and safely returning to their landing vehicle in an allotted time using only a computer interface with their Amateur Radio.

Anderson said first-place winners in their respective categories included Eliyah Jagroop, KI7IZL; Christena Baker, KI7WOI, and Savannah Holden.

Seven radio amateurs mentor in the youth-led Arizona Amateur Radio Association (AZARA). In addition to Anderson, they include Joe Lewellen, K7JEL; Daryl Duffin, NU7X; Neil Hays, W6FOG; Alexander Fulcher, N4SVD; Pat Delong, KD7KEL, and Heather Caton, W8GEM, an educator who teaches Amateur Radio in the schools as part of the curriculum.

A unique facet of My La Paz is its focus on Amateur Radio, Anderson said, because of what it can offer the county's young people in sparsely populated La Paz County, where many families live at the poverty level.

"In many ways, Amateur Radio has become the students' first social media, since many of their homes have no computers or internet access," he told ARRL. "It no longer matters where a youth lives or their family income; they can now participate in learning opportunities or making new social connections and friends via the Desert Amateur Radio network." The number of youngsters now licensed across La Paz County is approaching 100.

"The students of this generation are fascinated by space exploration and robotics," Anderson said. "And the rover project provides a way to let them explore this with radio science and be inspired into learning while making science fun."

Anderson said more information, including a rover block diagram, schematics, parts list/sources, and source code, is available on the AZARA website.

Used with permission The ARRL Letter for May 31, 2018

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JOTA Event Coming Up For Local Scouts

This information was passed to me by our MDC Assistant Section Manager for Scouts, Herman Niedzielski, K2AVA, k2ava@arrl.net: In Oct, 2017, Troop 413 in Kauffman (near Marion) Pennsylvania hosted a large number of scouts at Camporee focused on ham radio, Jamboree on the Air (JOTA), and the Radio merit badge. The youth in the troop so enjoyed this experience, they want to do it again in Oct, 2018. JOTA is the 3rd full weekend in October 2018.

Daniel, KB3MUN, will need hams to again help with this event, ranging from instructing radio merit badge, ham-in-a-day class, acting as VEs and in general operating as scouts do 3rd party conversations.

JOTA is like a Fall Field Day with respect to setting up antennas, stations, and operation. The site again will be the Kauffman Community Center near Marion, PA.

During the six weeks of summer camp at Camp Sinoquipe (near Ft. Littleton, PA) there will be another opportunity for scouts to experience amateur radio.

On Tuesday evenings, Radio merit badge will be taught, and 3rd party ham radio operation will be offered.

On Wednesday morning and afternoon, radio direction finding activities, 3rd party ham radio operation and a VE session will be offered.

Daniel, KB3MUN, will need hams to help with these six events. You may sign up for either or both days, and for any or all of the weeks. Hams are needed for operating as scouts do 3rd party conversations, helping with RDF activities, and acting as a VE.

If you have antennas or rigs you wish to lend to this scouting activity that would be appreciated as well. If you have any questions, please contact Daniel, KB3MUN, at: D. Daniel McGlothin, KB3MUN, 6315 Gehr Road, St. Thomas, PA 17252, (717) 377-2337 cell, daniel@mcglothin.us

Used with permission MDC Section News, June 14, 2018
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MARS Urging Members to Use Computers that are Isolated from the Internet

US Army Military Auxiliary Radio System (MARS) headquarters is recommending that MARS members "migrate to standalone computer systems for [MARS] radio operations," subject to the availability of a dedicated computer.

"These computer systems (or their associated local area networks) should be 'air-gapped' from the internet," Army MARS Headquarters Operations Officer David McGinnis, K7UXO, said in a message to members. "Although not a requirement for membership at this time, we will continue make this a condition of certain parts of our exercises."

McGinnis pointed to remarks by Cisco researchers in a recent *Ars Technica* article that discussed how hackers "possibly working for an advanced nation" have infected more than a half-million home and small-office computers "with malware that can be used to collect communications, launch attacks on others, and permanently destroy the devices with a single command."

McGinnis told Army MARS members that MARS Headquarters does not discuss specific cyber threats with MARS members or with the public. "We also cannot confirm or deny information about specific threats," he said, adding that he had "no specific knowledge" about *VPN Filter* malware and no comment on the Cisco report.

For communication exercises this year, MARS established conditions for a certain portion of the drill that requires use of standalone computer systems "normally not connected to the internet." He said used or refurbished PCs are widely available at low cost and could be dedicated to serve a standalone function.

"The most effective way to protect against threats that come from the internet is to isolate from the internet," McGinnis added.

"Despite a standalone environment, we assume that all computer systems in private citizens' hands are infected with hostile software code of some sort and are not secured," he said. "No amount of virus and malware scanning software changes that assumption. We can, however, isolate computers by disconnecting them from the international network in which hostile software will report and receive instruction."

McGinnis said future versions of MARS software will check for an internet connection and will disable the software. "We understand this lockout does not provide security in and of itself; rather, its value is in changing the behavior of members," he explained.

MARS Program Manager Paul English, WD8DBY, told ARRL that the MARS goal is to isolate MARS members' computers from the internet as much as possible and that isolating members' computers used for MARS-related activity is "a goal, but has not been directed."

Used with permission The ARRL Letter for May 31, 2018
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***QST* has been honored with the E.T. Krenkel Medal.** In making the award, being held here by *QST* Managing Editor Becky Schoenfeld, W1BXY, the Russian National Academy of Researches and Discoveries commended *QST* for "outstanding global contributions to Amateur Radio." The award's namesake, Ernst Teodorovich Krenkel, was a radio amateur who, over the years, used the call signs RAEM, U3AA, and UA3AA.

The Polish-born Krenkel was an Arctic explorer who took part in the first Soviet "drifting station," North Pole-1 and was made a "Hero of the Soviet Union" in 1938 for his exploits. Krenkel's son, T.E. Krenkel, was among the four signatories to the award certificate. He said his father was an avid radio amateur who served as the first chairman of the Central Radio Club in the USSR. E.T. Krenkel's image appears on postage stamps from the USSR and Russia, and he authored a biography entitled *My Callsign is RAEM*. In the era when all radio amateurs received QSL cards via Box 88, Moscow, Krenkel was allowed to have his own postal address on his QSLs and was issued the non-standard RAEM call sign.

Used with permission The ARRL Letter for May 31, 2018
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W1AW 2018 Spring/Summer Operating Schedule

Morning Schedule:

Time	Mode	Days
1300 UTC (9 AM ET)	CWs	Wed, Fri
1300 UTC (9 AM ET)	CWf	Tue, Thu

Daily Visitor Operating Hours:

1400 UTC to 1600 UTC - (10 AM to 12 PM ET)
1700 UTC to 1945 UTC - (1 PM to 3:45 PM ET)

(Station closed 1600 to 1700 UTC (12 PM to 1 PM ET))

Afternoon/Evening Schedule:

2000 UTC	(4 PM ET)	CWf	Mon, Wed, Fri
2000 "	"	CWs	Tue, Thu
2100 "	(5 PM ET)	CWb	Daily
2200 "	(6 PM ET)	DIGITAL	Daily
2300 "	(7 PM ET)	CWs	Mon, Wed, Fri
2300 "	"	CWf	Tue, Thu
0000 "	(8 PM ET)	CWb	Daily
0100 "	(9 PM ET)	DIGITAL	Daily
0145 "	(9:45 PM ET)	VOICE	Daily
0200 "	(10 PM ET)	CWf	Mon, Wed, Fri
0200 "	"	CWs	Tue, Thu
0300 "	(11 PM ET)	CWb	Daily

Frequencies (MHz)

CW: 1.8025 3.5815 7.0475 14.0475 18.0975 21.0675 28.0675 50.350 147.555
DIGITAL: - 3.5975 7.095 14.095 18.1025 21.095 28.095 50.350 147.555
VOICE: 1.855 3.990 7.290 14.290 18.160 21.390 28.590 50.350 147.555

Notes:

CWs = Morse Code practice (slow) = 5, 7.5, 10, 13 and 15 WPM
CWf = Morse Code practice (fast) = 35, 30, 25, 20, 15, 13 and 10 WPM
CWb = Morse Code Bulletins = 18 WPM

CW frequencies include code practices, Qualifying Runs and CW bulletins.

DIGITAL = BAUDOT (45.45 baud), BPSK31 and MFSK16 in a revolving schedule.

Code practice texts are from QST, and the source of each practice is given at the beginning of each practice and at the beginning of alternate speeds.

On Tuesdays and Fridays at 2230 UTC (6:30 PM ET), Keplerian Elements for active amateur satellites are sent on the regular digital frequencies.

A DX bulletin replaces or is added to the regular bulletins between 0000 UTC (8 PM ET) Thursdays and 0000 UTC (8 PM ET) Fridays.

Audio from W1AW's CW code practices, and CW/digital/phone bulletins is available using **EchoLink** via the W1AW Conference Server named "W1AWBDCT." The monthly W1AW Qualifying Runs are presented here as well. The CW/digital/phone audio is sent in real-time and runs concurrently with W1AW's regular transmission schedule.

All users who connect to the conference server are muted. Please note that any questions or comments about this server should not be sent via the "Text" window in EchoLink. Please direct any questions or comments to w1aw@arrl.org .

In a communications emergency, monitor W1AW for special bulletins as follows: Voice on the hour, Digital at 15 minutes past the hour, and CW on the half hour.

FCC licensed amateurs may operate the station from 1400 UTC to 1600 UTC (10 AM to 12 PM ET), and then from 1700 UTC to 1945 UTC (1 PM to 3:45 PM ET) Monday through Friday. Be sure to bring your current FCC amateur license or a photocopy.

The complete W1AW Operating Schedule may be found on page 90 in the March 2018 issue of QST or on the web at,http://www.arrl.org/w1aw-operating-schedule .

Used with permission ARRL Bulletin 8 ARLB008 March 12, 2018
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The Anne Arundel Radio Club is a registered 501C3 charity.

We are pleased to receive any donations over your yearly dues.

Letters: Practice Counts!

The Pacific Palisades Amateur Radio Emergency Group (PPAREG) of California has started a communication practice setup that may be of interest to your readers. The driving factor is that regular land line phone service is becoming a victim of cord cutting -- with widespread loss of power, it is anticipated that more than half of the residents will not have recourse to 911 in any form. The 911 system could be down as well.

In such a scenario, in a disaster situation, radio amateurs can canvass their neighborhoods to attempt to assess what has happened. So, for our practice sessions, we have selected a local group of blocks known as the "Alphabet Streets." The idea is to observe, collect and communicate. An on-site net control is assigned as a data collection point, while others are assigned to walk the blocks and make reports block by block.

All participants rotate assignments and experience all communication positions. We learn from mistakes and speed of data intake issues. Learning and proficiency comes from actually performing the functions in the structured environment communication and data exchange.

For data observation practice, we have started with counting parked cars on a given street, going from intersection to intersection. It's simple and non-intrusive. Message traffic counts usually amount to several dozen per operator rover/base pair for a one hour session. Other practice is to count other things such as parkway trees, motorcycles and trucks. Then, we assign these counts real life attributes such as number of residents, gas leaks, power lines down, residence fires, non-ambulatory injuries, victim non-responsive, etc. The collected findings are reported out on the appropriate ICS forms.

Our community of some 30,000 residents is situated between the mountains and the Pacific Ocean. Landslides can block road access, take down infrastructure and residents are cut off and left to manage on their own. They are the focus of our assessments, outreach and communications, to help them get the assistance they need.

We are interested in gaining more traction for our practice by establishing some more formal agreements, MOUs, etc. We hold up as a model the city of Cupertino, which has partnered with the Amateur Radio community to create a highly tuned and polishedcommunication/emergency response system. -- *Scott Reaser, K6TAR, Pacific Palisades, California*

Used with permission The ARES E-Letter for June 20, 2018
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UPCOMING HAMFESTS

This is a list of hamfests in the Maryland-DC Section area.I am including hamfests in nearby Pennsylvania, northern Virginia, West Virginia and Delaware as a courtesy to our neighboring Section Managers.

I, as your MDC Section Manager, Marty Pittinger, KB3MXM, and/or a designated ARRL representative(s), plan to attend all hamfests in the ARRL Maryland-DC Section.

We hope to see you all there.

68th Annual Berryville Hamfest
Date: Sunday, August 5, 2018
Sponsor: Shenandoah Valley Amateur Radio Club
Location: Clarke County Ruritan Fairgrounds, Berryville, VA
Website: http://www.svarc.us/hamfest

Pennsylvania State Convention (Uniontown Gabfest)
Date: Saturday, September 01, 2018
Location: Uniontown ARC Clubhouse, Uniontown, PA
Sponsor: Uniontown Amateur Radio Club
For more info, click on: http://www.w3pie.org

Virginia Beach Hamfest
Date: Saturday, September 8, 2018
Location: Virginia Beach Convention Center, Virginia Beach, VA
For more info, click on:
http://virginiabeachhamfest.com

CARAfest
Date: Sunday, October 7, 2018
Location: Howard County (Maryland) Fairgrounds
Sponsor: Columbia Amateur Radio Association
For more info, click on: http://www.carafest.org

Used with permisssion MDC Section News, June 14, 2018
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13 Colonies Special Event to Mark 10th Anniversary this Year

The annual Original 13 Colonies Special Event will mark its 10th anniversary this year. The event gets under way on July 1 at 1300 UTC and runs through July 8 at 0400 UTC. Event Manager Kenneth Villone, KU2US, reports that 127,132 contacts took place during the 2017 13 Colonies event, down from 139,772 in 2016, owing in part to poor band conditions.

Special event stations with 1 × 1 call signs will represent the original 13 US colonies, plus bonus stations WM3PEN in Philadelphia and GB13COL in Durham, England. Each special event station will have its own QRZ.com profile page. Participating stations try to contact all 13 Colony Stations plus the two bonus stations.

Call signs and their respective states are K2A, New York; K2B, Virginia; K2C, Rhode Island; K2D, Connecticut; K2E, Delaware; K2F, Maryland; K2G, Georgia; K2H, Massachusetts; K2I, New Jersey; K2J, North Carolina; K2K, New Hampshire; K2L, South Carolina, and K2M, Pennsylvania.

Additional information is on the 13 Colonies website.

Used with permission The ARRL Letter for June 28, 2018
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Anne Arundel Radio Club NEWS

The *Ham Arundel News* is the monthly official publication of

The Anne Arundel Radio Club, Inc.
(ARRL Club No. 0484).

Editor: Milford Craig / N3WYG
Send newsletter articles, questions and information to **Milford** at **newsletter@w3vpr.org**
Deadline for submissions – The Saturday after the 3rd Thursday of the month

Mailing Address:
Anne Arundel Radio Club
Post Office Box 308
Davidsonville, MD 21035

Meetings:
General Business 1st Thursday at 7:30 PM
Board Meeting 2nd Thursday at 7:30 PM
Program/Activity 3rd Thursday at 7:30 PM

Dues:
$30 per year, payable December 1st
Discounts available for family members and students

World Wide Web: **www.w3vpr.org**

AARC Supports The Maryland Slow Net:
3.563 MHz CW 7:30 P. M. Daily

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Free Money for AARC!
ARRL Membership Reminder

ARRL affiliated clubs receive a commission for every new ARRL membership and renewal they submit to ARRL Headquarters. Clubs retain a portion of the dues for each regular or senior membership submitted to ARRL Headquarters:

Clubs retain $15 for each new membership OR lapsed membership (of two years or more).
Clubs retain $2 for each renewal,
A RENEWING MEMBER can renew at any time, even before their current membership expires.

Send your application and payment (made out to AARC) to the club treasurer.

Mark Your Calendars

REGULAR ACTIVITIES

Club Meetings are held on the first and third Thursdays of the month from 7:30 to 9PM at the clubhouse located at the Davidsonville Family Recreation Center in Davidsonville, MD

Free License Exams every 2nd Saturday of the Month - Check in at Noon, Exams at 1PM - At the clubhouse - Contact Steve/K3BAY k3bay@w3vpr.org

Weekly AARC 2-Meter Net on 147.105 (Typically linked to 147.075 and 444.400) every Wednesday at 8 PM - All Welcome

2 meter Morning Commuter Net on 147.105 (Typically linked to 147.075 and 444.400) every morning 6:30 am to 9:00 am.

EVENT SCHEDULE

Sunday, July 1 1:00pm
AARC (new date) Kit-building, troubleshooting and repair, at 1 to 4 PM at the clubhouse
Thursday, July 5 7:30pm
AARC - Club meeting, newcomers are always welcome.
Sunday, July 8 6:00am
AARC (support) METAvivior - Kayak, Run, Bike
Thursday, July 12 7:30pm
AARC - board meeting
Saturday, July 14 12:00pm
AARC - Free License Exams
Sunday, July 15 1:00pm
AARC - Mesh Networking group, at 1 to 4 PM at the clubhouse
Thursday, July 19 7:30pm
AARC - Club meeting, newcomers always welcome.
Sunday, July 22 6:00am
AARC (support) Rosaryville Trail Run, 10k, 10M, 25k, 50k
1:00pm
AARC Kit-building, troubleshooting and repair, at 1 to 4 PM at the clubhouse
Saturday, July 28 6:00am
AARC (support) Endless Summer 6-Hour Run

May 17, 2018
Anne Arundel Radio Club
General Meeting
Meeting Minutes

Board Members in Attendance
Richard Grace KB3ZYO President
David Rawley AE5Z Vice President
Keith Miller AE3D Secretary
Justin Leishman KC3BJT Treasurer
Mark Bova W2PAW Director
Tim Nagel KB3YQK Director
Jim Wallace N3ADF Director

Agenda:

Pledge of Allegiance
Introduction
Meeting Minutes
Membership Application
Presidents Remarks
Announcements
Presentation
50/50 Drawing

President Richard Grace (KB3ZYO) called the meeting to order at 7:30 pm.

Pledge of Allegiance:

Meeting Minutes:

It was announced that the May 3, 2018 minutes as created by Secretary, Keith Miller (AE3D) have now been posted on the club's bulletin board.

Introduction:

Each person present identified themselves by call sign when possible, and included information on club positions currently held.

Applications for Membership:

Secretary, Keith Miller (AE3D) announced that the club has received 5 applications for regular membership, all of whom passed their Technicians exams last Saturday, May 12, 2018. They are William Witt (KC3LKV) from Crofton, Maryland; David Arnett (KC3LKW) from Lothian, Maryland; Eric Reinbold (KC3LKX) of Abingdon, Maryland and who is a member of the current AARC General License Class; plus, William Turner (KC3LKY) from Glen Burnie, Maryland; and Kevin Young (KC3LKZ and soon to be WA3YLO) of Bowie, Maryland. Further the club received a 6th application from Bill Ryan (K3WDR) from Deale, Maryland. Bill made application for regular membership then submitted dues in the amount for a family membership. While the club is still sorting out the details he can be vote into regular membership at this meeting.

I move we accept applications for regular membership in the Anne Arundel Radio Club from Bill Ryan (K3WDR) a General Class License holder from Deale, Maryland, and from the following five Technician Class Licensee holders, William Witt (KC3LKV) from Crofton, Maryland; David Arnett (KC3LKW) from Lothian, Maryland; Eric Reinbold (KC3LKX) of Abingdon, Maryland, William Turner (KC3LKY) from Glen Burnie, Maryland; and Kevin Young (KC3LKZ) from Bowie, Maryland.

Maker: Keith Miller (AE3D)
Second: Richard Grace (KB3ZYO)
Motion passed unanimously.

This brings the club to 220 members. At the current rate of growth, and considering we plan a technician class in the fall, we may easily exceed 250 members by year's end.

President's Remarks:

President Richard Grace, KB3ZYO greeted the membership

Tower Maintenance:

At the May 10th Board Meeting the Board voted to recommend the following motion to the membership. This motion recommends we accept a tower maintenance contract essentially identical to the one approved for the most recent tower maintenance several years ago. Last time we approved a bid from Teltronics not to exceed $5200. On that occasion the final bill came to less than $2000. The membership should note that, before we authorize Teltronics to proceed we will need to complete an inspection of the 2 meter antenna currently in use. This will allow us to determine if the antenna needs replacement at the same time as the maintenance is due, and give us time to receive a replacement antenna if needed before proceeding. So though this motion would approve the Board going forward with the maintenance work, it does not mandate any particular timetable.

Move we recommend that the membership approve accepting the contract for tower maintenance offered by Teltronics not to exceed $5200.

Maker: David Rawley (AE5Z)
Second: Rick Steer (AB3XJ)
The motion passed unanimously.

Announcements:

Eric Berman announced the J-pole Project was progressing well and that most of the 20 kits have already been spoken for.

It was announced that the Shack Renovation Project is progressing well, and that wallboard is has now been mudded and is in process of final sanding. Painting is next.

Keith Miller (AE3D) announced that the Antenna Tuners Group will meet again this Sunday, 1:00 PM in the clubhouse. Currently 8 of the 10 tuners work properly and the feedline length's have now been calculated. We are waiting for the rain to stop before we start assembling and labeling the various feed lines.

It was announced that Holly Bevin (N1MB) now a Silent Key will be interred in the Columbarium at Arlington National Cemetery at 1:00 pm, tomorrow, May 18, 2018. Those who plan to attend should plan to arrive at the Cemetery at noon.

Presentation:

This meetings presentation was given by Rich Grace (KB3ZYO), in his position as Field Day Chairman. Rich filled the remaining positions as Rig Chairman, and Shelter Chairman during this presentation.

50/50 Drawing:

The 50/50 drawing was held. The winner was Bruce Strackbein (WR3Q).

Adjournment:

Meeting adjourned by the President, Richard Grace, (KB3ZYO) at 8;45 PM.

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IARU Region 1 Editorial Warns of the Danger of VHF/UHF/Microwave Spectrum Grabs

The chair of the International Amateur Radio Union Region 1 (IARU R1) VHF-UHF-µW Committee, Jacques Verleijen, ON4AVJ, has highlighted extant threats to the Amateur Radio spectrum above 30 MHz. In an editorial that heads the latest edition of the *IARU R1 VHF-UHF-µW Newsletter*, issued on May 29, Verleijen invited all IARU member-societies to consider ways to "promote, defend, and use our frequencies."

"They are wanted by others, both government and commercial users," Verleijen wrote. "So, this is a wake-up call to be aware that if we are not using those bands, we will lose them." If that happens, he continued, it won't be the fault of IARU R1, but of the amateur community that "often [has] more commitment to HF" than to VHF and higher bands. Conceding that the HF bands "are the easiest to use," Verleijen said member-societies should think outside the box to come up with ideas to improve VHF, UHF, and microwave activity.

Verleijen said the vast amount of Amateur Radio spectrum from 50 MHz through 5 GHz makes it an attractive target for commercial and governmental interests. He noted that 50 MHz is the focus of a key World Radiocommunication Conference 2019 (WRC-19) agenda item -- specifically, to harmonize the 6-meter allocation across all three ITU Regions.

"It would be unfortunate to see a repeat of the WRC-15 result for 5 MHz, where high hopes and years of hard work actually resulted in a few kilohertz at 15 W [EIRP] max," Verleijen continued. A repeat of that situation on 6 meters could mean a "far more devastating" loss of existing spectrum and future opportunities for digital innovation.

The 2.3 GHz and 3.4 GHz bands are highly sought after for commercial wireless, Verleijen said, pointing out that the UK recently auctioned large segments of 2.3 and 3.4 GHz spectrum once available to Amateur Radio, "threatening significant activities from narrowband/Earth-Moon-Earth to DATV (digital amateur TV)."

Two WRC-19 agenda items affect 5 GHz, focusing on Wi-Fi and so-called "intelligent transport." Amateur Radio, as a secondary service, faces another difficult challenge in this part of the spectrum and has "little influence over its direction," Verleijen contended. In IARU Region 1, the primary concern is the expansion of Wi-Fi into 5,725 - 5,850 MHz.

"[O]ur preoccupation with traditional or [narrowband] modes does not justify the amount of spectrum," he said, noting that "some activity levels are quite low" outside of contests.

"Ideally, we need genuine open innovation and to show amateurs leading in the 21st century," Verleijen said. "Pressures on amateur bands are nothing new, but we know that the spectrum pressures above are not helped by poor engagement, relationships, or lack of a united approach" in some member-societies, with respect to their administrations

Used with permission The ARRL Letter for May 31, 2018

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OPERATING TIP

Search and Pounce from the Bottom of the Band

You may achieve greater success searching and pouncing if you start from the bottom of the band. Stations running at the bottom of the band *in general* have bigger signals and may be easier to work. The reason that the bigger signals congregate in the lower portion of the band is that they know S&P operators tend to start at the bottom of the band…

Used with permission The ARRL Contest Update for June 13, 2018

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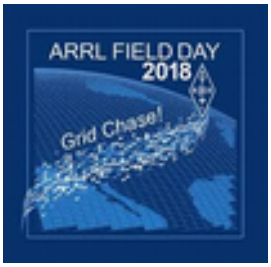

Maricopa, AZ Group Prepares To Go Off Grid

By BETHANY BLUNDELL Staff Writer
Jun 19, 2018

MARICOPA — In the event of a cyber-attack or natural disaster, the thing that would likely be the first to fail is what most people now rely on the most: cell phones. That is why one group is working to ensure Maricopa stays prepared with the Annual Emergency Communication Drill.

The event is known as Field Day and is organized by the American Radio Relay. The Maricopa Amateur Radio Association is a chapter of that organization. Each year, MARA and other radio affiliates participate in a preparedness day.

“It is a stimulation for if we lost all commercial power,” said Steve Miller of MARA.

Miller said if the city lost grid power, it would generally lose the ability to communicate. In an emergency situation, this would limit the ability to get supplies, medical assistance and other necessities to the city.

During Field Day, organizations participating in the event will try to make as many radio contacts as possible in a 24-hour period. They can only use solar or battery-powered devices. Miller said the goal is to make as many radio contacts as possible. Each contact is worth one point, and if that contact is made in Morse code, that is worth two points.

At the end of the 24-hour period, the groups with the most points will be declared the winner. MARA has participated in this event four times, and placed as one of the top teams for their first year.

Those who participate are licensed in amateur, or “ham,” radio.

“Hams are just people who enjoy learning and being able to communicate around the world,” Miller said. “Hams not only can build and modify their radio equipment, but are responsible for inventing some of the modern electronic conveniences we use today.”

In fact, hams are so important to communities, Miller said they are often called in times of crises to provide emergency telecommunications support for fire and police departments because those systems run off electronic computers.

While the competitiveness adds a fun aspect to the event, Miller said people shouldn’t neglect its importance.

“It wouldn’t take much to take us off the power grid, and if that happens, we don’t know what would take place,” he said.

The Field Day will take place from 11 a.m. on Saturday to 2 p.m. on Sunday. The Maricopa group will be housed at the Maricopa Police Department substation in the community room. Miller said the event is open to the public, so anyone interested in becoming licensed in amateur radio or simply wants to see how it all works is welcome to come.

“The more people who are licensed the better because we will have more people to talk to and be able to keep the hobby alive,” Miller said.

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FCC Denies Petition Aimed at Preventing Interference from Digital Repeaters to Analog Repeaters

The FCC has turned away a *Petition for Rulemaking* from a Michigan radio amateur that asked the Commission to amend Section 97.205 of the Amateur Service rules to ensure that repeaters using digital communication protocols do not interfere with analog repeaters. Charles P. Adkins, K8CPA, of Lincoln Park, had specifically requested that discrete analog and digital repeaters be separated either by distance or frequency and that digital repeaters be limited to 10 W output, the FCC recounted in its June 1 denial letter, released over the signature of Scot Stone, the deputy chief of the Wireless Telecommunications Bureau's Mobility Division. According to the letter, Adkins had characterized digital repeaters as "a major annoyance" to analog repeater operators.

"In 2008, we rejected a suggestion to amend Section 97.205(b) to designate separate spectrum for digital repeaters in order to segregate digital and analog communications," the FCC said in its letter to Adkins. "We noted that when the Commission has previously addressed the issue of interference between amateur stations engaging in different operating activities, it has declined to revise the rules to limit a frequency segment to one emission type in order to prevent interference to the operating activities of other Amateur Radio Service licensees."

The FCC told Adkins that current Part 97 rules already address the subject of interference between amateur stations, prohibiting, among other things, willful or malicious interference to any radio communication or signal, and spelling out how interference disputes between repeaters should be handled.

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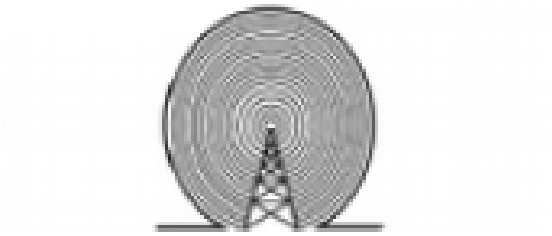
AARC Two-Meter Net Controller Schedule — 2018



01/03/18	KB3ZYO	Rich
01/10/18	KB3MUV	Raven
01/17/18	K3ACT	Chuck
01/24/18	W3KNH	Jamison
01/31/18	KB3YQK	Tim
02/07/18	K3MAW	Mike
02/14/18	AA3EB	Ed
02/21/18	KB3ZYO	Rich
02/28/18	KB3MUV	Raven
03/07/18	K3ACT	Chuck
03/14/18	W3KNH	Jamison
03/21/18	KB3YQK	Tim
03/28/18	K3MAW	Mike
04/04/18	AA3EB	Ed
04/11/18	KB3ZYO	Rich
04/18/18	KB3MUV	Raven
04/25/18	K3ACT	Chuck
05/02/18	W3KNH	Jamison
05/09/18	KB3YQK	Tim
05/16/18	K3MAW	Mike
05/23/18	AA3EB	Ed
05/30/18	KB3ZYO	Rich
06/06/18	KB3MUV	Raven
06/13/18	K3ACT	Chuck
06/20/18	W3KNH	Jamison
06/27/18	KB3YQK	Tim

07/04/18	K3MAW	Mike
07/11/18	AA3EB	Ed
07/18/18	KB3ZYO	Rich
07/25/18	KB3MUV	Raven
08/01/18	K3ACT	Chuck
08/08/18	W3KNH	Jamison
08/15/18	KB3YQK	Tim
08/22/18	K3MAW	Mike
08/29/18	AA3EB	Ed
09/05/18	KB3ZYO	Rich
09/12/18	KB3MUV	Raven
09/19/18	K3ACT	Chuck
09/26/18	W3KNH	Jamison
10/03/18	KB3YQK	Tim
10/10/18	K3MAW	Mike
10/17/18	AA3EB	Ed
10/24/18	KB3ZYO	Rich
10/31/18	KB3MUV	Raven
11/07/18	K3ACT	Chuck
11/14/18	W3KNH	Jamison
11/21/18	KB3YQK	Tim
11/28/18	K3MAW	Mike
12/05/18	AA3EB	Ed
12/12/18	KB3ZYO	Rich
12/19/18	KB3MUV	Raven
12/26/18	K3ACT	Chuck

REPEATER FREQUENCIES

Davidsonville	Millersville	Glen Burnie	Annapolis
147.105+		147.075+	
223.880-	224.560-		
444.400+			442.300+

PL: 107.2 for all repeaters

The 147.105 and 147.075 repeaters are frequently linked. Please leave an extra second after the courtesy beep to allow the link to reset as well.

Visitors are welcome *to all meetings and nets.*
Meetings are held in the Clubhouse at the
Davidsonville Family Recreation Center,
Queen Anne Bridge and Wayson Roads off
MD Route 214 near Davidsonville, MD.
For en-route directions,make initial contact on the 147.105 repeater.

Wednesday Night Talk Net -- All are welcome

8PM, On the AARC Repeater 147.105

Other Amateur Radio nets

Name	Frequency	Day	Time
Morning Commuter Net	147.105+Mhz PL 107.2	Weekdays	0600
AA County ARES Net	146.805- Mhz PL 107.2	Sunday	2000
Baltimore Traffic Net	146.670- Mhz	Daily	1830
Maryland Emergency Phone Net	3.820Mhz	Daily	1800
MD-DC-DE Traffic Net	3.557Mhz	Daily	1900 and 2200
Maryland Mobileers Net	146.805 PL107.2	Monday	1930
Maryland Slow Net	3.563 MHz	Daily	1930
REACT Net	442.300+Mhz PL107.2	1st Sunday	1930

The Radio Amateur Operator is...

CONSIDERATE

...He/[She] never knowingly operates in such a way as to lessen the pleasure of others.

LOYAL

...He/[She] offers loyalty, encouragement and support to other amateurs, local clubs, the IARU Radio Society in his/[her] country, through which Amateur Radio in his/[her] country is represented nationally and internationally.

PROGRESSIVE

...He/[She] keeps his/[her] station up to date. It is well-built and efficient. His/[Her] operating practice is above reproach.

FRIENDLY

...He/[She] operates slowly and patiently when requested; offers friendly advice and counsel to beginners; kind assistance, cooperation and consideration for the interests of others. These are the marks of the amateur spirit.

BALANCED

...Radio is a hobby, never interfering with duties owed to family, job, school or community.

PATRIOTIC

...His/[Her] station and skills are always ready for service to country and community.

- adapted from the original Amateur's Code, written by Paul M. Segal, W9EEA, in 1928The Radio Amateur's Code