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MARC Proceedings

Content

From the MARC President's Desk – Aleks W3JAG

Our Amateur Radio Mission is defined by federal regulation. We are a voluntary noncommercial communications service established to: serve the public, especially by providing emergency communications; advance the radio art; expand the number of Amateur Radio operators, technicians, and electronics experts; and enhance international goodwill. We have summarized this mission for our Field Day 2019 as "innovate, educate, and serve."

Amateur Radio ranks are filled with astronauts, scientists, and engineers who innovate, advancing the radio art with their scholarly articles and impressive inventions. But not every innovation has to be at the Nobel-prize level of accomplishment. Some of the most beneficial innovations can also the simplest ones. It is even in our lexicon, known as "home brew," where we are constantly tinkering, wiring, soldering, and erecting new and better ways to communicate. "Of course," someone would say, when spotting a terrific fix, "that's so obvious." The best inventions, ones that save time or space, improve performance or ease the level of effort, can seem obvious once completed, but it takes an innovative mind to think of it in the first place.

At Field Day, ask to see our "sky hooks" that save many hours in setup time, designed and built by Glenn KC3CNT. Or admire our patch panel, which centralizes and greatly simplifies the way antennas are connected to radios during operations and is the brain child of David N3ADE. Or, if you live in a housing complex with limited land space, or limiting HOA rules, ask Jeff KZ3F to show you his 5' high antenna, demonstrating that you don't need a tall tower to transmit, just a little ingenuity.

We educate new hams as part of our federal mandate to "expand the number of Amateur Radio operators, technicians, and electronics experts." Our seamless life-cycle education system, developed by David W2LNX, consists of running training classes for aspiring hams preparing to take the FCC license exam, conducting exam sessions for individuals taking the exams, and storing equipment for loan to new hams. David also conducts workshops at the Rockville Makerspace, where attendees can build new types of equipment, learn to solder, build circuit boards, etc. But we also learn from each other informally as we share our knowledge, skills, and new ideas. We take seriously the role of Elmers (our ham word for mentors), who happily (because it is our culture) dedicate their time and energy to advise and assist fellow hams. We live by the creed that no ham is ever alone. There is a whole community of hams ready to help.

Most importantly, we serve not just during emergencies, but by supporting public service events. Paul N3RQV, MARC public service coordinator and Ron KB3SYA, the public service coordinator for DECT, provide an important public safety and information communications service at local events, such as marathons and parades. Dispersed throughout the parade, walk or run route, they are the "eyes on" the participants, watching to make sure the event runs smoothly, while any medical issues are quickly spotted and addressed. Paul and Ron and their radio teams work closely with local community leaders to insure a fun—and safe—time for all. And, while they support the local community, they are the face of Amateur Radio, enhancing goodwill locally, just as our long-distance operators do by sharing friendly transmissions with other countries and other peoples, enhancing goodwill internationally.

MARC-DVFD-DECT

Whiskey-Three-Mike (W3M)

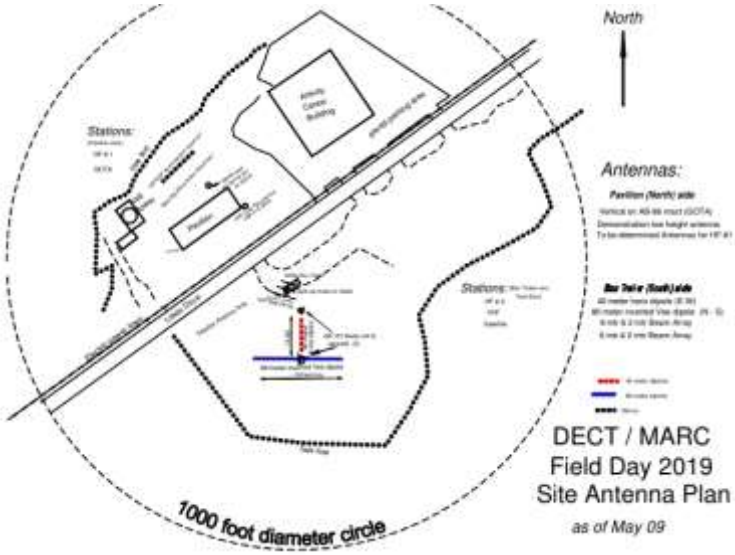
Field Day 2019 Friday June 21st to Sunday June 23rd

The ARRL's (Amateur Radio Relay League) Field Day is officially an 'operating event,' not a contest. The purpose remains today as it did in the beginning: to demonstrate the communications ability of the amateur radio community in simulated emergency situations. Groups across the United States and Canada use Field Day as a literal "show and tell" exhibition. At sites from the tundra of Alaska to the sandy beaches of Puerto Rico, amateur radio brings together its resources to show officials in government and various agencies what "amateur radio can do." (Above text extracted from ARRL website)

MARC'S SIXTH YEAR PARTNERSHIP WITH DECT/DVFD

For the sixth year in a row the Montgomery Amateur Radio Club (MARC) marcclub.org is partnering with the Damascus Emergency Communication Team (DECT) to serve the Damascus Volunteer Fire Department (DVFD);- our host for each year's ARRL Field Day. Planning is well underway. The MARC club has been conducting on-the-air planning discussions on the 146.955 repeater every Thursday 7:30 PM. All are welcome to check in and share ideas or make inquiries on how one can participate. The following is the W3M entry made on the ARRL Locator: W3M MARC DVFD DECT EMCOMM 10211 Lewis Dr., Damascus MD 20872 39.290603, -77.2125, MD GOTA: YES (KV3B) Talk-in: 146.955 minus / No PL

The graphic is the MARC-DVFD-DECT Field Day site layout. This image serves as a reference for those interested in deploying a station including all necessary components. Use the zoom feature in your reader for a closer look at the image.



A great variety of activities and venues are planned including a 2-Meter Welcome Station (Ron KB3SYA). A number of items to be found near or at the welcoming station will be a Guest Log and a Participant's Log. Pamphlets' and business cards that echo the site's themes of Innovate, Educate and Serve are to be provided to the public. To capture the attention of the public David W2LNX will be conduction Meet & Greet activities. One of the asides that W2LNX will provide will be educational insight on Winlink operations. Jeff KZ3F will demonstrate an innovative way to work Near Vertical Incident Skywave contacts using a dipole mounted only 5-feet off the ground.

Friday afternoon and Saturday morning will be an opportunity for the MARC-DVFD-DECT teams to observe and help installing the site electrical grounding system at both the North and South locations. W3TDH is driving the ground system activity. Bill KB3WKK plans on installing a two-masted antenna array on the South side consisting of a 40-meter dipole and a 80-meter inverted Vee. Bill has facilitated the 40-meter dipole for the past few years at the site; an antenna that has proven capability.

The "yummy" station is also planned; a food station in the pavilion will serve to keep participants energized to work through the daunting weekend event. Other creature comforts are available. The Activity Center has rest-rooms.

"Al" NW2M will bring a Anderson Powerpole kit and offer a "PlugFest" for those interested in having their power cords brought up to standards. He plans on working out of the MARC Trailer on the South side.

Dennis KD6DPR, plans on having all the laptops configured for field day but for those who cannot make it to his club hosted clinic, he will be available at the Field Day site to get the PC's setup.

"AL" NW2M and "Ed" are preparing the MARC Trailer installing the new crank up mast. Ed will be delivering and picking up the trailer to and from the FD site again this year.

"Hank" N3ESR will be loaning out his 5K generator again this year.

The Civil Air Patrol squadron may also attend. See article below.

Dave N3ADE at GOTA Station with potential hams

N3ADE to Set Up Get-On-The-Air (GOTA) (Again)

For the n-th year (probably at least six-years), Dave, N3ADE will be installing the Field Day GOTA station inside the pavilion operating the GOTA position at the Damascus Volunteer Fire Department (DVFD) site. The GOTA station will be using call sign KV3B. If you have not been active on HF since the last FD please stop by and ask N3ADE for the opportunity to operate the station.

W3TDH to Set Up Grounding System

Tom, W3TDH plans on setting up the Field Day site grounding systems for both the pavilion stations and the south-side stations. Word is that he will begin this work on Friday afternoon/evening. Some hams have expressed an interest in learning more about robust electrical grounding systems. Here is an opportunity to observe or even volunteer their help. Tom can offer any number of tips depending on what kind of station you are interested in setting up either in the field or at home. The grounding layout that W3TDH will be focused on is germane to Field Day operations. Individual station crews will need to be responsible for some items, such as enough number 6 gauge (or larger) conductor wire to run from the station's grounding busbar to the grounding electrode system Tom will advise you on some other items such as connectors.

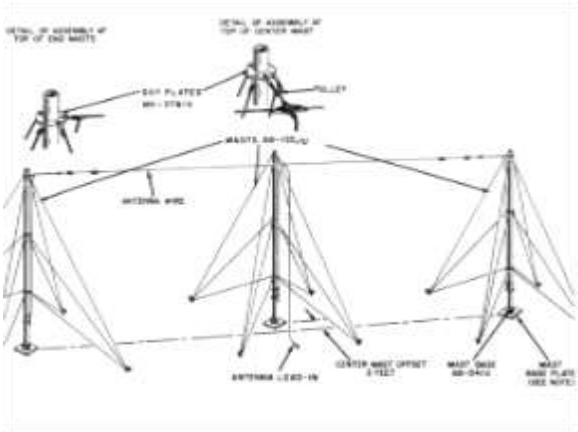
K3RYR & KC3MIX Satellite Station

Ben K3RHR and Ken KC3MIX are planning on operating a Satellite station with the goal of making at least one contact which will qualify as a 100-point bonus or the W3M performance. They plan using two HT's with separate cables to an Elk dual band antenna. Ben and Ken will be setting up a camper on the bed of a Ford 150 truck. W3TDH may install a MK 2551 Army surface ground system for the satellite station.

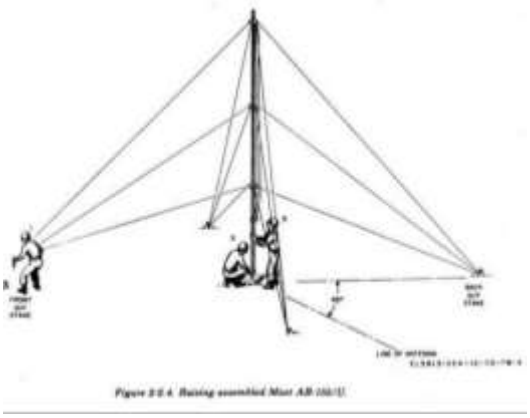
W3JAG Plans Category "Alpha" Station in Pavilion

Aleks W3JAG is planning to setup a 20-Meter SSB/Phone station in the Pavilion. Her station is a category "A" station meaning log entries will be made under event site Call Sign of "Whiskey Three Mike" (W3M). The exchange will be "Whiskey Three Mike" Three Alpha (3A) Mike Delta Charly (MDC). The 3A designates the total number of transmitters operating at the same time for W3M. There could be more stations at the time of the event. MDC is the ARRL Section. Lori W0MMM plans on operating Aleks' station.

KB3WKK to Erect Two-mast Antenna System



Bill KB3WKK plans on installing two AB- 155 masts on the South side to hang a 40-meter Dipole and a 80-meter Inverted Vee. He will launch a 40-Meter Dipole between the two masts. A 80-Meter Inverted Vee will attach on one of the masts. He will run feedlines to the MARC club Trailer hosting the N4DR station described below. Bill has been instrumental the past few years installing similar antennas that have proven to be very successful in garnering many QSOs on CW. This year the N4DR will be a bit more versatile insofar it can be used for SSB-voice, Digital and CW. The following are some graphics regarding the antenna setup.



N4DR To Set Up Category "Alpha" Station in MARC club Trailer

N4DR "Marc" is coordinating the setting up of a Category-Alpha station located on the South side operating out of the MARC club trailer. Vic, WB2U is contributing a ICOM IC-7200 transceiver, a IT-100 Automatic Antenna Tuner, a desktop microphone and other paraphenalia. Nancy W3NN has loaned her laptops. Vic has installed the N1MM Logger s/w, FLDIGI, and WSJT-X software in case someone wants to operate digital modes. Hence the trailer station can be operated in all relavent HF modes. Valerie KC3HPJ plans on operating SSB-Voice starting at arround 4PM Saturday. KB3WKK Bill may be kicking things off at 2PM operating SSB. Tom K3TC will pick up the station at 6PM and operate CW until 8PM. N3COB Glenn will then operate CW from 8PM until 11PM at which time John K3LO is planning on operating CW overnight. N4DR plans on grabbing the CW key at around 7 or 8 AM Sunday morning. Vic WB2U will be available Saturday to operate CW and serve as a logger and "elmer". Scheduling looks promising and may actually be sufficient to have the station operating for the full 24 hours.

W5DJV Plans Category "A" Digital Station

Daniel W5DJV is planning to setup a HF Digital Station to run on Saturday. Tetatively planning to operate until late Saturday night, Daniel may be disassembling his station allowing anyone to replace his station with one's own equipment. He will be using his ICOM IC-7300 and a Buddipole antenna . Each Digital station QSOs, like CW QSOs, are worth 2-points each.

W3MGZ Experimental Station

"Marc" W3MGZ plans on bringing his GO-BOX consisting of a Yaesu FT-857D along with a Super Antenna Model MP1B. He simply wants to avail himself the opportunity to experiment with his GO-BOX in-the-field and sees Field Day 2019 as a chance to do it. He will be bringing his children to particpate.

AB3VZ "Vijay" to set up Experimental Station

Vijay, AB3VJ, plans on setting up a portable DEMO station consisting of a Kenwood TS-440S and a Butternut HF4V-S vertical to operate on 20/40 meters. The total length is about 15'-16'. The bottom element has a pipe attached to it (2' long,1.25" dia) and he plans on using one of the club's tripods for support.

Bethesda-Chevy Composite Squadron to Attend FD 2019

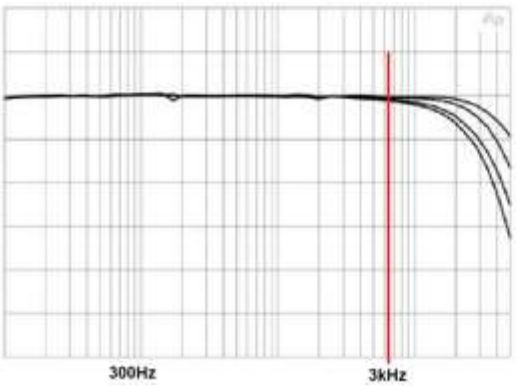
The Bethesda-Chevy Composite Squadron is a local unit of the Civil Air Patrol that meets in Gaithersburg. They plan on attending the MARC-DVFD-DECT Field Day site and possibly commence activities with a color guard ceremony. The Squadron is a volunteer organization that is part of the Official Auxiliary of the U.S. Air Force congressionally mandated to implement Aerospace Education, Cadet Programs and Emergency Services.

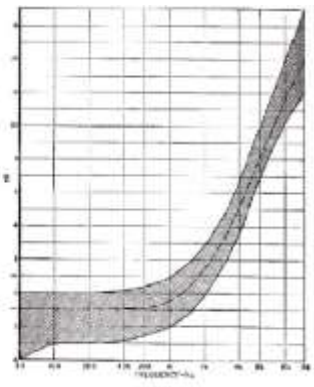
ROCKVILLE SCIENCE DAY

David W2LNX took the lead again setting up an on-the-air Amateur Radio exhibit at the 30th Annual Rockville Science Day Sunday April 28th. The event took place at the Rockville Campus of Montgomery College. The exhibit ran from 11 AM to 5PM and set-up started at 9AM. David was assited by the Ham Family : Chuck KB3FKH, Robyn KB3CUE and Isaac AC3CJ. Also assisting was Marty KB3AEV and Glenn W1GHR.

Repeater Audio Characteristics, by: Al - NW2M

Please recall that our 146.955 repeater system has 7 transmitters, 7 receivers and 13 antennas! Each requires independent tuning and alignment for optimal performance. It also means that each radio exhibits its own analog "personality". FM radio deals with pre-emphasis (boosting treble on transmit) and de-emphasis (reducing treble on receive) to achieve a high SNR when signals become weak. The emphasis process is not an exact standard- but rather, sets high and low thresholds. As long as you stay in your swim-lane... you pass. In order to mask/hide the high frequency artifacts from all of the different radios, the Voter which votes at 10-15 times per second, and the picket fencing pops on weak signals, the main transmitter limits the audio pass-band to approx. 3,000 Hz. On the other side of the audio spectrum, there is no low-frequency cutoff. This means that PL tones pass thru the system with ease. Please do not run PL/CTCSS on the 146.955 repeater. It is simply not needed. So yes, you do have a "hum" on your signal. It may not be a 60Hz or a 120Hz hum, but 156.7Hz is not that far away.





PUBLIC SERVICE

MARC's primarily mission at these events is the safety of the participants, course volunteers, and the public, as well as situational awareness for the race directors and coordination with police and medical personnel. This is accomplished by establishing a tactical radio net with volunteer radio operators on the course at key locations and shadowing race directors, police, and medical personnel, depending on the event. Communication is via HT through local repeaters and/or simplex frequencies.
Don't know if this is something you want to do? Maybe you simply want to observe what goes on before you commit to working an event? Contact us and we will arrange for you to work with an experienced volunteer to observe and understand what is involved in working a public service event. Pls find Paul N3RQV video detailing MARC public service events for 2019 here https://www.youtube.com/watch?v=b65YKxnL9ao&t=115s

Upcoming Events:
Takoma Park July 4th Celebration, https://www.takomapark4th.org/sitecode.fol/pages.fol/tpidcparade.aspx
Date: Thursday, July 4 Time: 6:30 am - 9:30 am

Damascus Days Parade
The Damascus Emergency Communications Team (DECT) is seeking volunteers for the 18th Annual Celebrate Damascus Parade. Fireworks follow the parade. https://www.facebook.com/celebratedamascus2019/
Date: Friday, July 12 Time: 5:30 pm – 9:00 pm Location: Damascus High School to Fire Department Activity

Rockville Rotary Twilight Runfest 8K https://rockvilletwilighter.org/
Date: Saturday, July 20, 2018 Time: 6:45 pm – 10:30 pm Location: Rockville, MD Frequency: 443.9 repeater

Riley's Rumble Half Marathon & 8K https://mcrrc.org/calendar-event/rileys-rumble-half-marathon-8k-2019/
A few bicycle mobile operators will be helpful for this event.
Date: Sunday, July 28 Time: 6:00 am - 10:15 am Location: 18031 Central Park Cir., Boyds, MD 20841 Freq 146.46 simplex

UPCOMING Hamfests

W4OVH Manassas Hamfest 06/15/2019 - 06:30AM to 14PM
Location: Manassas Park Community Center, 99 Adams Street, Manassas Park, VA Sponsor: W4OVH, Ole Virginia Hams
Website: http://manassashamfest.org Talk-In: 146.97- (PL 100.0)

Father's Day Hamfest at Arcadia 06/16/2019 Location: Arcadia Fairgrounds, 16920 Carnival Avenue, Upperco, MD 21155
Sponsor: Baltimore Amateur Radio Club Website: http://w3ft.com Talk-In: n/a
Contact: Dave, AB3TE, Phone: 410-252-2878, Email: summerentrepreneur@yahoo.com

Maryland/DC Section (MDC) Echolink Net Information

The Maryland-DC Section holds a section-wide Echolink net **every third Friday of the month at 8:00 PM EDT** on the Echolink WASH_DC node 6154. If you would like to join in on RF, the following repeaters/IRLP have linked in for previous Echolink nets:
- N3HF-R, 443.45(+), PL=151.4, located near Ocean City, MD - N3HF-R, 443.45(+), PL=156.7, located near Silver Spring, MD
- W3ICF-R, 146.73(-), PL=141.3, located near Frederick, MD

Everyone is encouraged to join in and give any updates on what is going on in your part of the ARRL Maryland-DC Section. If you don't have Echolink on your computer, you may download the software, free-of-charge, from: <www.echolink.org>. As always, we thank John Creel, WB3GXW, for making the WASH_DC Echolink server as well as his WB3GXW-R repeater available for the Echolink net. Everyone is invited to stay connected to the WASH_DC server on Echolink for the ARRL Audio ARES E-Letter and Amateur Radio Newsline which immediately follows our net. The following tabular data is provided by K3TJC "Bill":

Net	Mode	Day	Time (local)	Freq.	PL	Purpose
MARC Sunday Net	FM	Sunday	7:30pm	146.955- MHz	—	Information
Public Service Net	FM	Tuesday	8:00pm	146.955- MHz	—	Public service & emerg
MARC 6-M Net	FM	Tuesday	9:15pm	53.270- MHz	156.7	Information
MARC Field Day Discussion Net	FM	Thursday	7:30 pm	146.955- MHz	—	Field Day Planning
Maryland Emerg. Phone Net (MEPN)	SSB	Daily	6:00pm*	3.820 MHz	n/a	Formal traffic
Empire Slow Speed (ESS)	CW	Daily	6:00pm	3.569 MHz	n/a	Training & traffic
Baltimore Traffic Net (BTN)	FM	Daily	6:30pm	145.330- MHz	—	Traffic
Maryland Delaware DC Net (MDD)	CW	Daily	7:00pm, 10:00 pm	3.557 MHz	n/a	MDC section traffic
Maryland Slow Net (MSN)	CW	Daily	7:30pm	3.563 MHz	n/a	Training & traffic
Radio Relay International East (RRIE)	CW	Daily	8:00pm	3.552 MHz	n/a	Formal traffic – long haul

*When band conditions degrade in late fall or winter, the MEPN may start an hour earlier.

D-STAR Nets

The MARC D-STAR repeater (444.200+) gateway is programmed to link to other reflectors to access nets hosted elsewhere. At the end of the programmed time the gateway links back to REF062C.

Net	Day	Time (local)	Reflector
International D-STAR Net	Sunday	8:00 to 8:59pm	REF001C
Philadelphia Digital Radio Net	Monday	8:00 to 8:59pm	REF020A
Raspberry Pi Net (1st and 3rd Mondays)	Monday	10:00 to 10:59pm	REF038C
PAPA System D-STAR Net	Tuesday	11:00pm to 12:59am	REF012A
Mid-Atlantic Auxiliary Communications Service	Wednesday	8:00 to 8:59pm	REF062A
National Capital Region Net (Washington DC)	Wednesday	9:00 to 9:59pm	REF062A
Ham Nation After Show Net	Wednesday	10:00 to 10:59pm	REF014C
PAPA Technical Round Table	Thursday	11:00 to 12:59am	REF012A