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MARC Proceedings

2-4 Winter Field Day Report

5 Technical Tidbit

5 Confessions of a Wannabe Ham - Part 2

6 ON-AIR

Dawn Patrol "High Crane Drifters"

Attempt to Become Oldest Circumnavigator

7 – 9 Public Service

Ken-Gar Tests Conducted

9 Radio Shack Challenge Solution

10 Events and Nets

Winter Field Day

MCACS Conducts Winter Field Day (WFD)

The weekend of January 26th marked the inaugural Winter Field Day for a group of local hams operating under the coordinating efforts of the Montgomery County Auxiliary Communication Service (MCACS) (<https://mcacs.net/>) MCACS participated in Winter Field Day on January 26-27, 2019.



The event was an unqualified success, and a lot of fun as well. It was located at Robertson Park, 801 Rabbitt Road, Gaithersburg. Operations commenced at 2 PM Saturday and ran through to Sunday 2:00PM after which everything was packed up and the site policed. Many MARC Club members were in attendance.



(Editors note: The following are extracts from

the mcacs.net website news. To read the ACS news in its entirety see <https://mcacs.net/wfd/>.)

MCACS had a good turnout for Winter Field Day (WFD) on January 26-27. This was the first time we (MCACS) participated as a group.

For those who are not familiar with Winter Field Day, it is very much like the ARRL Field Day event that takes place in June, but is organized by a small not-for-profit group that operates on a shoestring and exists solely to make Winter Field Day possible. The premise is that emergencies don't always happen in the summer, and we need to practice deploying under winter conditions. It's that simple.

For general information about Winter Field Day from the sponsoring organization, please click here: <https://www.winterfieldday.com/>.

The Basic Plan

We operated in Class 3-1 (Three-India) using the MCACS call sign, WA3YOO. When the dust settled (or maybe I should say, when the mud dried), we had 234 contacts in the log. We reached 63 unique ARRL/RAC sections, 44 of the 50 states and 4 Canadian provinces. That's pretty cool, when you think about it. We reached all four corners of the lower 48, and also Alaska and NW Territories.

Although Saturday started out chilly at 20 degrees, we had a gratifyingly large crowd assembled at 0800 to begin setup.



The first challenge was maneuvering the MAIPN van, with its 13-plus foot superstructure, under a low-hanging bough to reach the site. With that accomplished, we quickly divided into crews to set up

antennas and shelters. The temperature climbed into the 40s. However, that resulted in a quick thawing of the field, and more than one of us managed to land on our backsides on the muddy hillside. By 2 PM, we had everything operational.

After sunset, the temperature dropped back into the 20s, but our night crew continued to make contacts throughout the wee hours under relatively balmy conditions inside our tent and van. The tent-in-tent concept seemed to work well, as a single small ceramic heater was sufficient to keep the tent warm.

RFI from at least one of the Honda inverter-generators was an issue, but a member quickly produced an in-line RFI filter that brought the noise level on 80m down to a reasonable level. We will be looking into this issue more closely.

The MAIPN van has an onboard generator and an RV-style ceiling HVAC unit. For those reasons, it was classified as an indoor station under the event rules. We used the van's 48-foot pneumatic mast to support a 2m/440 base station antenna as well as an inverted-Vee antenna. It's really nice to have a station that can be ready to operate shortly after arriving

on scene.

AI KN3U – MCACS WFD
Coordinator

Objectives

We were more interested in giving everyone who wants to a chance to operate than in making maximum QSOs. Really, the focus was on the technical and logistical aspects of setting up functional stations under winter conditions, and having our participants test their personal preparedness and clothing under those conditions. Several new hams had their first experience operating HF, and a number of hams tried out their go-kit stations over the course of the weekend.

We were successful in dealing with conditions that are typical for the mid-Atlantic region in January. On the other hand, I think we were all secretly relieved not to have to deal with freezing rain, high wind, or the single-digit temperatures that we experienced just a few days after the event. Maybe next year

Location

We were grateful to the Gaithersburg Department of Parks, Recreation and Culture for enabling us to use Robertson Park. We set up on the edge of a soccer field, carefully avoiding buried irrigation lines that the city staff had flagged for our benefit. Our hosts went out of their way to make it possible for us to use this site, and in return, we were careful to "leave no trace behind," being especially careful to avoid damaging the playing field.



Nancy W3NN helped finding WFD site

Thermal barrier under tent



David Ludington Park Host



Tent-In-Tent - 10'x13' Eureka Copper Canyon enclosed under 2 canopies w/ 3rd canopy as vestibule



MDC Section Emergency Coordinator, Jim WB3KAS, Assistant Section Mgr, Wanda KA3AHI w/ Daniel W5DJV





STATION 1



STATION 2



STATION 3 IN THE MAIPN VAN

Here is a list of some (not all) who visited or participated.

N3YHF, WM1E, W3TDH, KN3U, W3SCI, W2LNX, K3MRI W4DOI, W5DJV, K3MIX, W3DK, W3CID, W3COB, W3ALH
WA3LT, WA3LTJ, K3ICI, N3YHF, W3NN

Here is the list of operators that got recorded in the Log:

K3ICI, K3MRI, K5MRH, KC3MIX, N3YHF, W3CID, W3HDB, W3NN,
W4BDOI, W4DOI, W5DJV, WA3LTJ, WA3SWJ



Not - Re-Frigerator Interference (R-FI)

Nancy Anthracite W3NN sent in the following correction regarding her problem on 6-meters:

I have learned, unfortunately, that the fix for the interference on the 6M band with timer on the refrigerator did not cure the problem. I have yet to find out what is causing it. The problem is intermittent and not present when the power to the house is off. For now, I am using my ICOM 7300 for talking on the repeater. The 7300 is on a different antenna, different feed line, etc., and does not have the problem.

Confessions of a Wannabe Ham - Part 2

By Marc N4DR

After receiving my Technician license by mail, I sat looking at it, and wondered what to do next! It was clear that I was not going to be getting on Six meters or higher frequencies anytime soon. The only path to getting on the air was to get my code speed up to 13 WPM, so I could get on as a General Class operator.

I had pretty much exhausted my use of the Ameco "Learn the Code" vinyl records.

It was clear that I needed a shortwave receiver with a BFO, so I could copy W1AW and get my code speed up by listening to actual on the air code transmissions.

How could I afford a receiver? Even the used tube receivers I saw for sale were way beyond my ability to pay. I had a measly \$20 saved up. The salvation came in the form of Heathkit! In an Boy Scout magazine advertisement, I saw the Heathkit GR-64, which covered from the AM Broadcast band to 30 Mhz. This sounded like the answer to my prayers. The only problem was it was \$39.95, a sum that was quite large for a teenage boy in the 1960s.

My father came to my rescue, and provided the necessary funds for me to buy the radio.

The radio did not work! Heartbroken!

At last the day came when the large Heathkit box arrived. The radio was in kit form, and I had no building experience of any kind. I did not even know how to solder! With no other hams to teach me, I would have to teach myself. Slowly and carefully I unpacked the box, and sorted the parts as Heathkit instructed, and began building. When I finished, I plugged in the radio and turned on the power switch, and was greeting by.....nothing!

The radio did not work! I was heartbroken! My dream of becoming a ham seemed even farther away.

Once again, my father came to the rescue. He noted that one of the people at his work was a former U.S. Army radio operator. Perhaps he could help. We took the radio over to him, and explained the problem. He said "Well perhaps I can fix it while you are here". Once the cover was off, he looked at my mess and said " This is going to take some time".

After about a week, I got a call from him that the receiver had been repaired, and was ready for use. Eureka! I got the radio home, connected it to a long wire that was out

my window, and magical sounds of foreign broadcast signals filled the air. I was totally fascinated with these signals, but I needed to get on with my Morse Code education.

How would I find W1AW? I tuned to the 80 meter band, because that band had the best amount of dial space allocated to it. I was tuning around and I finally heard at about 5 WPM, "QST DE W1AW". I had found them. It was about 10 minutes before the start of the code practice. I later learned that the transmissions started about 10 minutes before the code practice to allow folks like me with simpler receivers the opportunity to find W1AW on their dial. At last, I was able to practice copying code right off the air.

On-Air

DAWN PATROL

Weekdays
5:00 – 11:00 AM
MARC Repeater 146.955 -

The Dawn Patrol participation continues to grow. Jack KB3WUM is quite active and is an early bird monitor of 146.955 driving to his work site. On arrival he climbs up a tower-crane to his cabin from which he can hit many repeaters. Jack is a tower-crane operator and joins formation high up atop his crane now located in Alexandria. Jack's friend "AJ" KC3JHK also operates tower-crane at the same site also joined in the Dawn Patrol. Jack operates a Peiner SK and "AJ" operates a Terex SK 415. We can call them our "High Crane Drifters" flyers since they can RX/TX at over 400 feet if needed. Currently their cabin is in the 250-foot range.



KB3WUM owns an embroidering machine and is considering designing a "Dawn Patrol Patch". Omar KN4RBR can be heard coming in from Chantilly, VA on his way to work.

"Marc" W3MGZ continues to frequent the repeater on the way to work but also early evenings commuting back and forth from Clarksburg and Baltimore. "Kaan" KN4RBR driving up from Woodbridge to Fairfax checks in around 8:45. Tony, KV4FA checked in. Couple of other newbies are N6MEJ and KA3INZ (now K3GLS). Glenn W1GHR also joined in recently. Brad KE7U was heard at around 8AM as well as Jim K3MRI. Kevin KB3PBZ was heard. WM1E worked Gil K7OR recently. WM1E chatted with KC3NSF. Other newbies have shown up; Gary WA1EIG, Tom K8SIQ. AFB Mike manages to join in at times from Ashburn.

Here is a list of those active in the morning on 146.955: W3KIT, WM1E, N3BAB, N4DR, N3COB, W3NN, K4HSI, W3MGZ, W2LNX, KP4N, KN4LJF, K3ICI, W3ALH, W3EME, KE7U, N6MEJ, N3YHF, WB2QOK, N3YOZ, KV4FA, K3DHS, KV4FA, KA3INZ, WB2U, W1GHR, KB3WUM, K3MRI, KB3PBZ, K7OR, KC3JHK, WA1EIG, KN4RBR. KC3JUW Pete, AF9B

Amateur Radio is Aboard During Attempt to Become Oldest Circumnavigator

Editor: The following was extracted wholesale from the Feb 21st "ARRL Letter":



Jeanne Socrates, VE0JS/KC2IOV, is used to solitude. The 76-year-old yachtswoman passed some 300 miles to the south of the southern tip of Africa on Valentine's

Day as she forged on toward Australia and New Zealand in her 38-foot sailing vessel Nereida. While underway, Socrates keeps in touch with a community of friends via

Amateur Radio -- although she had to yield to the ARRL International DX CW activity last weekend -- and she's sticking to a schedule of 7.160 MHz at 0230 UTC daily. Socrates reported making contact with some ham radio friends on the US west coast on February 17. She's been blogging her progress.

The retired math teacher and UK native also is no stranger to circumnavigating the globe, having already become the oldest woman to complete a solo, non-stop, unassisted round-the-world voyage. Ham radio served as her link to terra firma during her earlier adventures. Since 2013, she's made two unsuccessful attempts to become the oldest person to circumnavigate Earth, the goal she's now attempting to achieve. Socrates departed Vancouver, British Columbia, last October.

PUBLIC SERVICE

Ken-Gar Tests Conducted

On January 18th Paul FitzGerald N3RQV sent the following alert to the MARC Reflector:

MARC's public service events don't always go off without a hitch. At last year's Parks Half Marathon, we had problems hitting the 146.955 repeater from several areas. Some of these problems related to terrain. The course follows Rock Creek Trail, i.e., lowest part of the county, down through the Rock Creek Palisades area. Palisades being the steep sections adjacent to the creek, it's not surprising there would be terrain issues in some areas. We also had problems at the Ken-Gar Palisades Park water stop and at the finish area about a mile south. Ken-Gar hasn't been a problem in the past. But, it was raining the entire event. So, we suspect the heavy rain on leaves caused attenuation of the signals. To look for ways to improve communications, on January 26, at around noon, Bill, KB3WKK, and I will be doing some testing at Ken-Gar of several



options. Since HTs are typically used at these events, we will look at higher gain antennas for the HT, both on the HT and mast mounted antennas. We will also try several options for one-way, cross band repeating into the 146.955 repeater. If you happen to be listening to the 146.955 repeater between noon and around 1:30 pm on the 26th, we would be happy to get any reception reports.

As planned, Paul N3RQV and Bill KB3WKK partnered on Saturday the 26th. The following is a report submitted by Bill KB3WKK that describes the Antenna and Mast Testing for Public Service purposes.

MARC Public Service Mast and Antenna Equipment Testing Event

Paul N3RQV and Bill KB3WKK met at Ken-Gar Park (Beach Drive near Strathmore Ave. Kensington) to test some options for easy-to-set-up masts and antennas that might be used in public service or emergency settings. The impetus for this test was the Sept 8, 2018 Parks Half Marathon race that was run in heavy rain. KB3WKK was located at Ken-Gar Recreation Center Park that day where water and aid stations were set up for runners along the Rock Creek Trail. This location is in a low elevation spot surrounded by palisades (bluffs). The terrain, extremely wet weather and lush tree vegetation added significant signal attenuation challenges to this location. The HT equipment at 5 watts would not bring up the MARC 146.955 repeater at this location in those conditions. A mobile rig running at higher power was able to reach the repeater, but was less conveniently located in a vehicle parked away from the race stations. N3RQV and KB3WKK wanted to determine if the use of a mast and antenna connected to an HT would improve its performance. Unfortunately, the weather and foliage conditions were much better than what was experienced on September 8, so the test value was somewhat limited by that variable.

N3RQV tried several antennas directly on a Yaesu FT-60 handheld. The OEM antenna, at about 7 inches, and a Diamond SRH77CA, at about 15 inches, were very similar into the repeater, which is less than 2 miles away. An MFJ-1714S telescoping wave, at about 42 inches, was slightly better, but fairly unwieldy. Both N3RQV and KB3WKK noted that turning away from the repeater so your body was

between the HT and the repeater antenna caused significant attenuation of the signal, often making the signal unreadable. This tended to confirm a QST article reporting that leaving your handheld transceiver next to your body will cause up to a 15 dB loss in output. This would cut your 5 watt HT to around 0.3 watts.

N3RQV brought three personally-owned telescoping masts. One was a Max-Gain Systems MK-4 25 fiberglass push up mast on a drive-on base with an Arrow Antenna Open Stub J-Pole. One was a Flagpole Buddy Under-Tire Mount with a 22 ft. fiberglass flag pole. This had a Larsen MNO2/70B wave antenna on a modified NMO mount drilled and tapped for four counterpoise wires. The last mast was an Ultimate Tripod



noted that turning away from the repeater so your body was

speaker stand with a 6 ft. extension mounting a Diamond X50A antenna. The HT used was a Yaesu FT60 operated at 0.5 watts with a Heil HTH headset. All three antenna masts were elevated to 16 to 20 feet or more feet above ground. N3RQV was easily able to erect everything himself with no assistance. All three masts fit into his vehicle. Signal reports received from WB2U, W3NN and others confirmed good performance of these set-ups. We appreciated their help.

KB3WKK brought a MARC-owned Rohn H30 mast and MFJ1921 5.5 foot tripod and an inexpensive 4 foot tripod designed for roof mounting. The H-30 fit into the 4 foot tripod and when extended to 20 feet, was able to be raised fairly easily by one person. A piece of 1 inch conduit fitted with a 4 inch x 4 inch steel electrical box cover was inserted into the top end of the H30 mast and a quarter-wave Diamond mag-mount dual band antenna was placed on the box cover. A homebrew copper wire radial cross slipped under the mag mount base, enabled the antenna to have a 1.2 SWR at 145.955. When connected to a Baofeng UV-5RE Plus, it easily brought up the repeater and signal reports indicated full quieting and good signal. It was



noted that the H30 is a telescoping steel mast that is rather heavy compared to the fiberglass and aluminum masts owned by N3RQV and was somewhat more difficult for one person to erect (although doable).

A further test of a cross band set-up using a Kenwood TM-V71A in KB3WKK's vehicle was performed next. The Baofeng HT transmitted on 446.000 MHz simplex to the Kenwood, which in turn re-transmitted the received signal to the MARC 146.955 repeater. The cross-band setup worked correctly and demonstrated (at FYI for the testing, I borrowed one of the Club's H30 masts from the Club Trailer along with one of the MFJ tripods. I also brought my own smaller tripod along to use with the H30. I was able to use the H30 in my smaller tripod and extend it on the ground to 20 feet (2 or 3 sections out). I was able to raise it into vertical position and we tested with it. Worked very well, but without wet green tree leaves, the result was not as informative. But it was helpful to know that one person can raise the H30 (without any guys) into position up to 20 feet long without too much difficulty. At our public service-foot race events, usually only one person is stationed at a location. So it's important that any mast solutions be fairly easy for a single person to raise. The H30 is not as easy as the light-weight mast equipment that Paul owns. But it can be transported on a car roof cargo rack without too much difficulty.

Elevation Profile – Main Site to Ken Gar

The elevation profile for the path from the Main Site Repeater to the KenGar Parking lot might give some idea of why we had some issues there. The Rock Creek 'canyon' wall (palisade) rises sharply shortly beyond the parking lot. Add

least to KB3WKK) the benefits of cross-band operation. This would be very effective for the conditions encountered during the Parks Half-Marathon at the Ken-Gar location last September. A second cross band test was performed using a Yaesu FT-8800 located at N3RQ's QTH about 1/2 mile from Ken Gar Park. This too worked correctly with good signal reports.

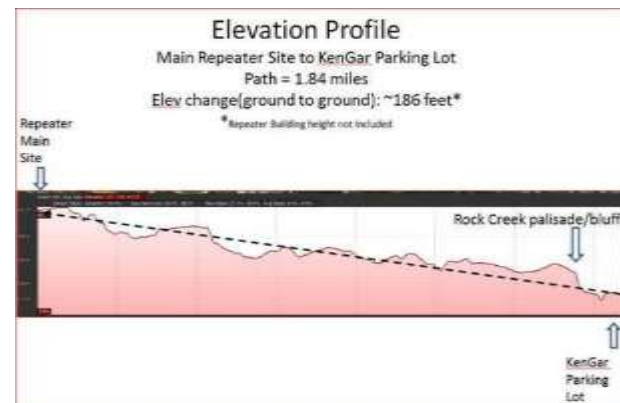
We will try to use the test results and experiences to advise operators in



similar locations (elevation impaired) and conditions (wet forests) about effective equipment solutions. It could also be a basis for future



purchases of similar equipment by MARC for public service and emergency communications use. Such equipment could be used by volunteer operators at events MARC members are participating in.



a forest of trees and lush wet foliage, and you get a challenge for an HT with a rubber duck antenna or small magmount antenna on a tripod (which is what was being used). The test was to (1) see what types of mast equipment we might have available for a single volunteer to use, and (2) if adding 12-20 feet of mast height would overcome the topography challenge. As you have pointed out, just getting up 12 feet or so does a lot of good. Ideally, another test in wet conditions with full green foliage would be the way to know better, but not as pleasant to be outdoors in January. (Submitted by Bill KB3WKK)

Public Service Events schedule for 2019

April 27	Rockville MS Walk	April 28	Pike's Peek 10K	April 28	Rockville Science Day
May 5	BCC Rescue 1 Run	July 4	Takoma Park July 4th Celebration	July 28	Riley's Rumble
July 12	Damascus Days Parade	July 20	Rockville Rotary Runfest	Nov. 3	Rockville 5K/10K
Sep 8	Parks Half Marathon	Oct 27	Marine Corps Marathon		

For more information on public service events, contact: Paul N3RQV



Radio Shack Challenge

The *MARC Proceedings* is asking readers to submit photos of their radio shack along with descriptions, stories or anecdotes. Last month posed a challenge to readers of the *Proceedings*. "Al" NW2M submitted the following photographs and asked if you can "find the differences". The editor counted five out of the seven listed in the Solution:

Solution: 1) Bar stool yellow logo is missing, 2) The IC-706 has been powered off, 3) The cable to the HT is missing, 4) The calendar on the wall/post is missing, 5) Knobs on the amplifier are missing, 6) Round speaker on top shelf is missing, 7) Cutters on top of the radio are



Events

NOVICE RIG ROUNDUP (NRR): March 2 to March 10 <http://novicerigroundup.com>

Antique Wireless Association (AWA) John Rollins DX Contest March 13-17

<http://www.antiquewireless.org/event-details-for-john-rollins-dx-contest.htm>

Sun. 03/24/2019 | WINTERFEST Annandale, VA, ARRL Hamfest, Vienna Wireless Society.

<http://viennawireless.net/wp/events/winterfest>.



NETS

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 Rapid Deployment Net	FM	Thursday	8:00pm	146.955- MHz	—	Rapid deployment
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