ISSUE 03 November 2018

A Journal of the Montgomery Amateur Radio Club (MARC) Rockville MD

MARC Proceedings

News and Features:

MARC TRAILER

MARC initiated a major project in 2017. Initial forays came as a result of a combination of issues; W3TDH concerns about storage of club assets, identifying club assets, and lessons learned from the 2017 Field Day such as Load-Out Load-In. These concerns emerged as early as July 2017 and from then on began a gradual building up of activities involving many club members in informal discussions that matured in formation of the Trailer Committee. Second only to the infra-structure associated with the MARC repeaters systems, the "trailer" becomes the next most valuable capital asset in the club's inventory. When one factors in the time and material that individuals make growing and developing these assets their true value can only be imagined. Future editions of the *MARC Proceedings* will try to carry reports and updates on the trailer's development and use.

The following is an extract from MARC President W3JAG's Annual Report presented to the club on November 7th.

- Club approved $6,500 for new trailer. $5,975 actual.
- 11 months into effort. Took possession in Dec 2017.
- Walk-on-roof option was critical for success.
- Many (12) anonymous donations! ~$2,000 in total.
- $3,900 BG&E Emergency Grant (Mast and Generator).

– ALM-31 mast, Honda EU2200i generator, storage enclosure.

– HD-73 rotor system, structural steel & aluminum.

- Wire-frame storage system (2 units).
- 8' wide operating position. 12V + 120V inverter.
- Active solar and battery system. 115W + 200Ah battery.
- Maiden voyage: MARC Field Day 2018 + Discovery Day.
- Oct 17th meeting generated 30+ ideas/suggestions for 2019.
- 2019 Budget submitted for review and approval.
- "Al" NW2M agreed to serve as committee chair in 2019.

The new generator box arrived Wednesday October 17th (thank you Terry W3EDU

NW2M is looking for ways to run the generator while it is completely inside this box. Storage, gas fumes, security/theft, vibration dampening, soundproofing, airflow/cooling, condensation, exhaust flows, grounding, and cable egress are all center stage. "Al" loves the challenge.

The portable generator that was purchased is the Honda EU2200i.

It features 2200 watts, 18.3A, 120V. Following are some of the manufacturer's bullets:

- Ideal for TV, DVD, satellite, fridge, coffee pot, and more
- Super quiet - like a conversation
- Lightweight - less than 47 lbs.!!
- Fuel efficient - up to 8.1 hrs on 0.95 gal of gas
- Inverter - stable power for computers & sensitive equipment

The generator also provides 12V at 8amps for batteries, lights, and fans.

"Al" NW2M reported, Saturday October 27th was a wash- literally! On Sunday the 28th, Mother Nature provided a window of opportunity. For the first time the mast is standing on its own feet! All of the vertical weight is now on the 3"x3" cross member. The smaller 1"x1" steel supports the front and back of the aluminum diamond plate. The paint is called POR-15. Later "Al" clamped the diamond plate in place, scribe lines, and cut to shape. Self-tapping stainless screws made easy work of this "cosmetic" attachment. Then he started on the enclosure for the generator. Much done. Much to do.

"Al" shared a very positive experience with a vendor advertising Honda EU2200i generators in QST. The name of the vendor is Motorsports of Ukiah in California. The sales guy David is a ham KM6LLL. The price was $100 under the minimum listing price as dictated by Honda. Our purchase included Free Shipping. Please shop direct. David opens the box, fills out the warrant card for you (MARC Club), fills the generator with oil and gas, fires it up, connects a 1500 watt load, and tests the line voltage and line frequency. Everything is then drained and shipped. I hope to have the generator in-hand this weekend. I plan to run the generator periodically to get past the break-in period. Once I perform the first oil change, it will be ready for FD, Public Service, and beyond.

"Just sharing a very positive experience (price too) with a QST advertiser. It takes a lot to impress me- I am impressed." 73, Al , NW2M

A Fine Day for an Antenna Raising Party

Cartoon by Gil W1CJD

Sunday October 7 2018, dawned clear and warm. It was a perfect day for the scheduled antenna repair party at the home of Marc N4DR. A group of hams was recruited to help with the project. They included Al NW2M, Gene AD3F, Andrew KC3KFU, Aleks W3JAG, and Marc N4DR. Al NW2M, provided the climbing help, and everyone had an assignment.

The main goal for the day was replacement of a 2M/70 CM antenna used for satellite work, and replacement of an 11 element 2 M beam for weak signal work. An additional task was re-attachment of coax cables to their mount where a tree branch had hit during a storm, and dislodged them. A 50 foot ladder was used to access the tower where the VHF and UHF antennas were located. A dual band antenna on the house itself was also re positioned and secured. All in all , it was a very successful afternoon, with everyone contributing to the effort and getting all the jobs done. After all the hard work in temperatures reaching into the high 80s, we adjourned to the air-conditioned Sun Room for some welcome refreshments. A nice time cooling off, and chatting, ended the day. Many thanks to all who helped. This was a project in the true spirit of Amateur Radio, and was greatly appreciated! – N4DR "Marc"

Photos left to right: Marc N4DR and Al NW2M scoping out the project. Center photo show Andrew KC3KFU joining. The third photo has Al NW2M climbing up to the VHF and UHF antennas. (Photos provided by Aleks W3JAG)

Marc Pressman, N4DR, has been a ham since 1966, when at age fifteen he was first licensed as WB4DRB. He is an Anesthesiologist specializing in Ambulatory Surgery Anesthesiology. Gale WB3KFC has been married to Marc for 44 years. They have two sons and two daughters, all of which are licensed. Marc got his Extra Class license in 1968. At that time he was one of the youngest hams to achieve Extra Class status. His interests in amateur radio include QRP, building and troubleshooting equipment, Digital modes, D-Star, and Satellites. He is a VE for both Laurel and the ARRL. As a former member of MARC, he reactivated his membership in 2016, after some years of inactivity. It has been his great pleasure to be active once again with MARC, and he especially enjoys participating in Field Day.

"Al" PLANTS BALCONY ANTENNA GARDEN

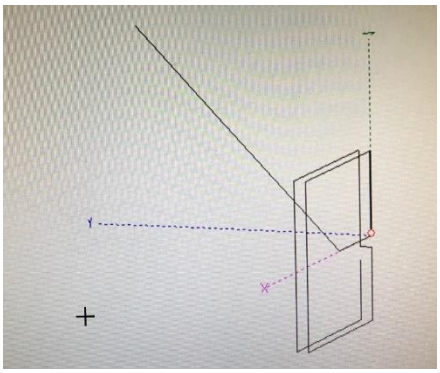
By "Al" W2NBJ

You can't stop a 95 old ham from operating an amateur radio station even when he lives in a senior-citizen apartment on the sixth floor. I have a 7 x 6 feet floor x 7 feet high balcony to work with to create an antenna farm that is both stealth and somewhat efficient on 40 to 6 meters. The following describes my effort to satisfy my goal.

I found that antennas that are mounted inside my shack or inside the balcony are not efficient radiators due to building walls absorption of the radio waves. A 12 feet whip, tilted 45 degrees from the horizon, facing outwards and mounted on the metal railing of the balcony worked fairly well but not on the lower bands.

I remember a knowledgeable ham made a profound statement that if all else fails string out as much wire in the restricted area for the lower bands. I used the whip with a two-turn wire vertical square open loop, 7 feet on each side, the turns spaced 6 inches apart and outwardly spaced one foot from the balcony. A plastic frame held the horizontal supporting poles. This assembly is all black in color to make it stealth. A closed loop by itself was a possible choice but a high ratio Balun would be required to reduce the high SWR (over the 40 to 6 meter band). It would also have less gain.

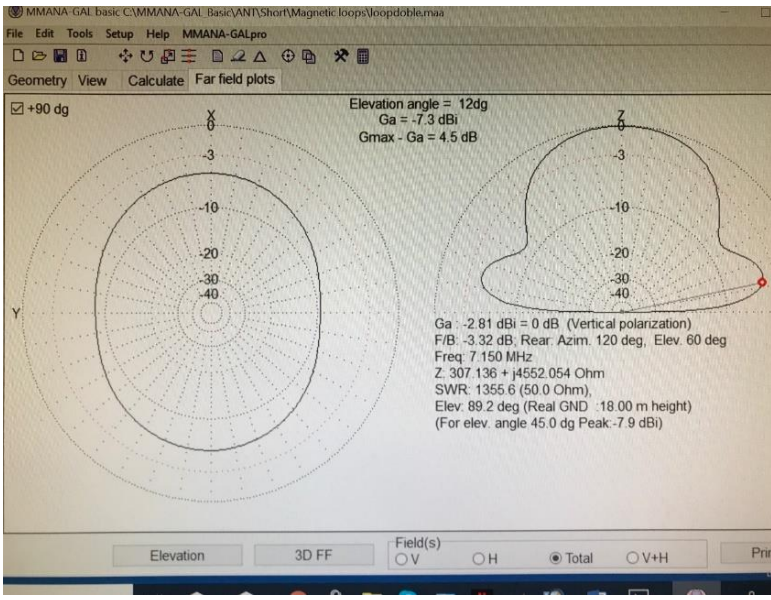
I used an open wire feed-line (6 inch spacing) 6 feet long connected to an IT-100 LDG automatic antenna tuner. At the antenna end of the feed line, one wire is connected to a length of wire (4 feet), its end is connected to the whip, at its base. The other feed wire is connected to one end of the loop wire. The other end of the loop is open ended. See the diagram below.



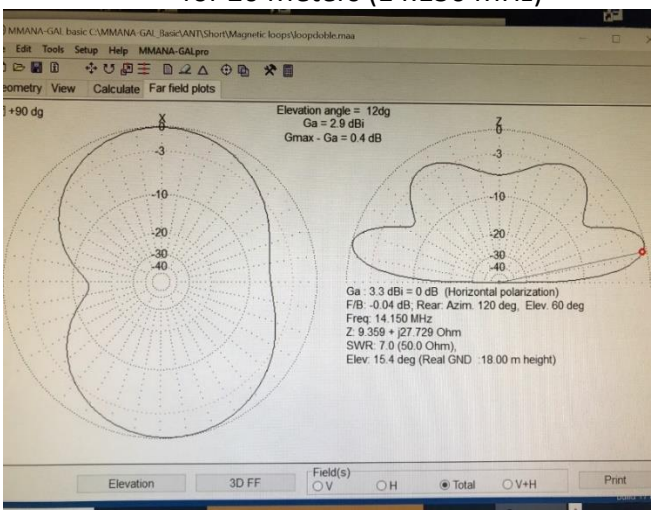
The antenna looks like a short whip with a ground plane but I am not sure if this is so.

I used the MMAM-GAL antenna analyzer program to get some insight as to how well this antenna is performing. The real horizontal antenna radiation pattern would be difficult to predict due the closeness of the metal railing and the building structure but the program plots are included anyway. The antenna tuner was able to tune all frequencies. Multiple turn chokes were wound on the input side of the tuner and all the interconnecting cables to the radio and computer were isolated with ferrite cores to limit improper operation of the equipment.

The following is an image of the MMAM-GAL analysis for 40 Meters (7.150 MHz)

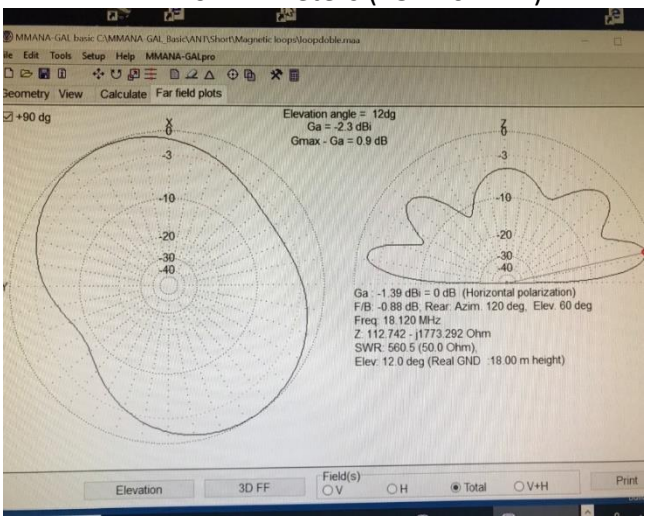


The following is an image of the MMAM-GAL analysis for 20 Meters (14.150 MHz)

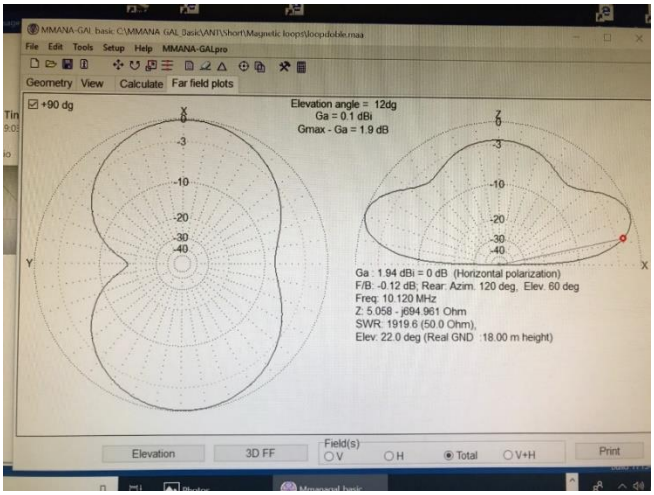


The bands recently have been very poor but by using the new digital ft8 program and 40 watts I have been successful in making contacts.

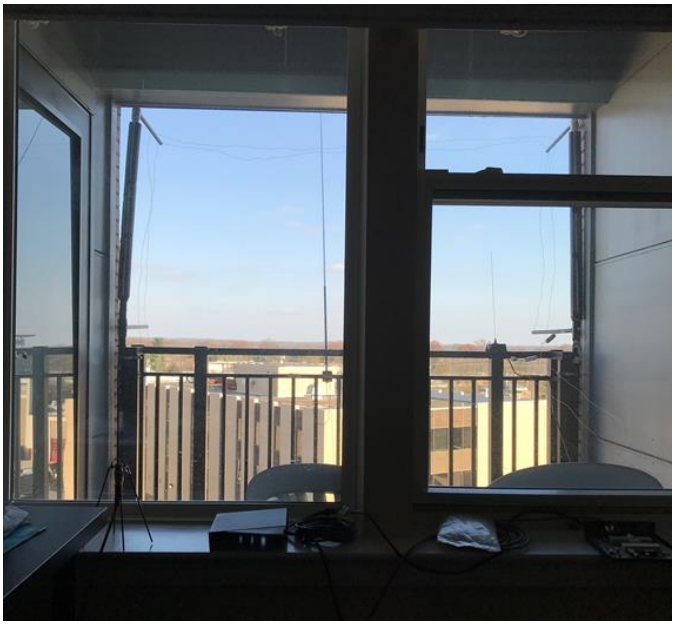
The following is an image of the MMAM-GAL analysis for 12 Meters (18.120 MHz)

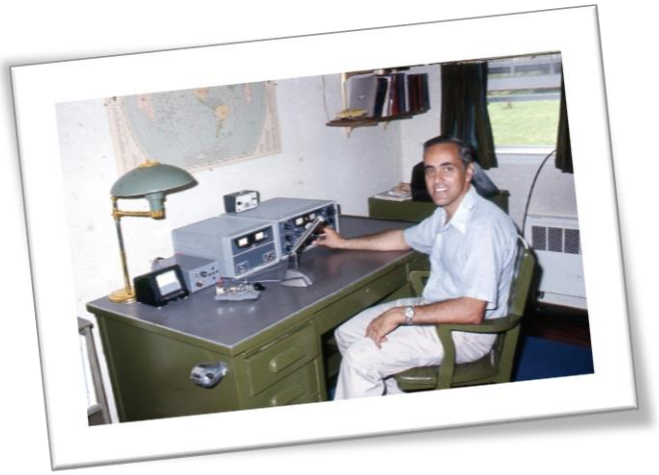


The following is an image of the MMAM-GAL analysis for 30 Meters (10.120 MHz)



My best dx is Russia, so far. The present antenna design is very experimental and debatable. I am open to all suggestions regarding this and other stealth antenna configurations that I should try. After all, you can't keep an old apartment dweller ham off the air.





Alexander "Al" Riccio W2NBJ

Al was license in 1940 and was ordered off the air in December 1941 due to the war. He holds an extra class license and is a member of ARRL for over 75 years. Over the years he has operated CW, AM, FM, SSB on the HF, VHF and UHF bands including OSCAR and digital modes. He has moved many times; installing and digging out his 50 feet high "Wonder Post" lattice tower at the new locations. He had many call letters but returned to his beloved original call, W2NBJ. He also holds Professional Licenses for the states of New York and Pennsylvania.

MARC EDUCATION

The Montgomery Amateur Radio Club (MARC) provides many opportunities for expanding one's horizon. One such opportunity is the educational benefits of Ham Radio. The MARC Education program goes a long way fulfilling many of the objectives stated in MARC's Articles of Incorporation and Constitution. The Education Committee touches just about every facet of the hobby and contributes both directly and indirectly promoting interest in amateur radio communication, experimentation, and public service, establishing amateur radio networks that provides communications in the event of disasters or other emergencies. David W2LNX, Education Committee chair provided the following reports:

"The Education Committee considers learning one of the most important aspects of amateur radio. It seems to easily capture the interest and enhance the creativity of young people. It also creates tremendous opportunities in so many academic fields and many areas of learning. And it does all of this by bringing to life the science and teamwork that makes learning more exciting.
Ham Radio also naturally spans languages and cultures as well as geographical and political borders. Through worldwide communications and events, it inherently promotes cultural awareness, cultural understanding and international good will. This creates the opportunities to make friends in any corner of the world, to practice a new language or to learn about foreign customs and lifestyles."

Year 2018 was a very busy and prosperous year for the MARC Education Committee. Not all educational venues were lecture-based nor are all presented in a class-room setting. The following report by W2LNX illustrates the granularity and varied ways the MARC club fulfills its mandate to expand the art of Amateur Radio and provide service to the public. This report is also the occasion to recognize often times, unheralded Hams who have contributed their time, talent, expertise and material resources meeting the above mentioned objectives. **The following summarizes 2018 activities:**

Ham Radio Classes

Technician license course – March 26 to May 5, 2018
Rockville Memorial Library makerspace
Instructors: Dick, WN3R, David, W2LNX, David, N3ADE, Glenn, N3COB and Ben, K3RYR and David, W2LNX as host
students: 68 registered, 20 passed Technician test at May 12, 2018 test session "lab" exercises:
public service events

Volunteer Examiner Test Sessions

November 12, 2017, December 10, 2017
March 18, 2018, May 12, 2018, July 8, 2018
September 9, 2018 – home visit, September 16, 2018
November 10, 2018 – TDB, December 9, 2018 – TBD
applicants: 105 passed: Technician: 52 General: 19 Extra: 8

Volunteer Examiners

Andrea, K3YLW (1) Ben, K3RYR (3) Chuck, KB3FKH (1)
Darwin, K4HAX (1) Dave, W3DKL (5) David, W2LNX (5)
Dennis, KD6DPR (1) Dick, WN3R (2) Eugene, NN0M (1)
Jeff, KB3ZUK (1) Joe, AB3CR (2) John, K3LO (1)

John, KC3JFJ (2) Komkit, W3KIT (1) Marc, N4DR (4)
Matt, KK4FQV (1) Michael, KA3IXO (4) Mike, K5MRH (1)
Mike, KA2JAI (1) Paul, N3RQV (3) Phil, KC3CNX (2)
Raghav, W0WRT (1) Tom, K1FEX (1) Valerie, KC3HPJ (1)

Hands-on Workshops

Basic Soldering – January 7 and 21, 2018

Rockville Memorial Library makerspace
instructors: David, W2LNX and Joshua, KC3ICM assisting
participants: about 8 including 4 youth
project: building LED blinker

BITX40 radio workshop – February 4, 18, March 18 and April 14, 2018

Rockville Memorial Library makerspace
instructors: Marc, N4DR and David, W2LNX
participants: 10 including 6 youth
project: assemble BITX40 transceiver semi-kit

Elmer Lending Library

Here are some items that have been lent out.
Andrew, KC3KFU – IC-718
Chuck, KB3FKH – TYT MD-380* & openSPOT*
Oren, KC3LUG – IC-718, John, KC3IYK – TYT MD-380 HT
Joshua, KC3FAM – FT-25R HT & antenna*
Kevin, KC3ARU – FT-25R HT & antenna*
Samarth, KC3JWB – TH-D7A APRS HTs & antennas
Mike, K5MRH – IC-718 , Tony, KC3JFE – IC-92AD D-STAR HTs
Don, WA3WOD

Public Demonstrations

Beverly Farms ES STEM Night – February 22, 2018
David, W2LNX demonstrated Morse Code and PSK-31

Northwood HS STEM Day – March 8
David, W2LNX, Tom, K1FEX and George, KC3LLJ
presentation on math used in communication and PSK-31

Takoma Park MS STEM Night – April 6, 2018

David, W2LNX, Tom, W3TDH and Al, KN3U
demonstrated Morse Code and PSK-31

Rockville Science Day – April 22, 2018

David, W2LNX and MARC members
demonstrated Morse Code, & Winlink on VHF, & HF PSK-31

Field Day – June 23 and 24, 2018

David, W2LNX and MARC members
demonstrated Winlink on VHF to visitors

Girl Scouts – June 30, 2018

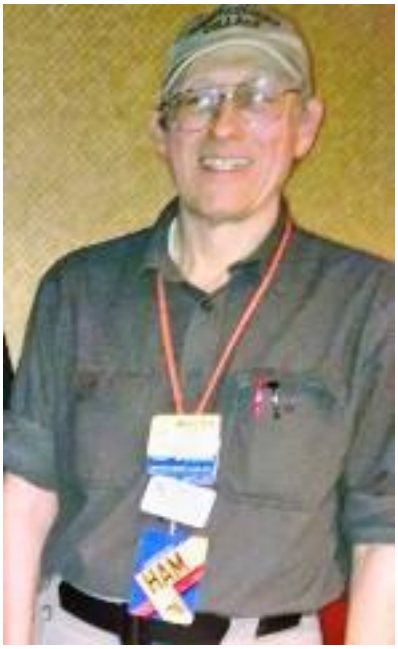
David, W2LNX, Tom, K1FEX and George Stimak KC3LLJ
demonstrated PSK-31 station

Discovery Day – September 23, 2018

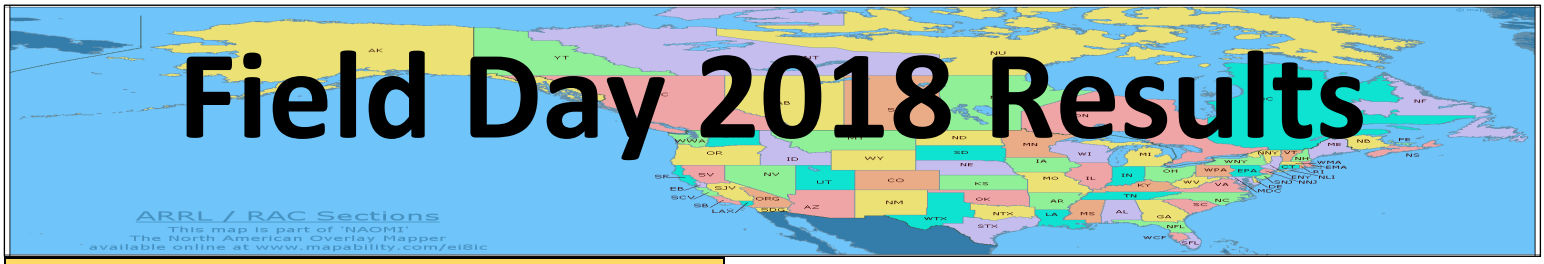
David, W2LNX, Nancy, W3NN and MARC members
demonstrated Morse Code and FT8 station

Boy Scouts Camporee – October 13, 2018

David, W2LNX and Howard, KC3LUE
demonstrated PSK-31 station



W2LNX “David”



Field Day 2018 Results

4A Class Atlantic Division Listing:
Pwr indicates 5=<5w, 2=<150w, 1=>150w. Prt=participants.

Call Sign	QSOs	Pwr	Prt	Score	Sec
N2SF	3282	2	47	11,982	ENY
W3YA	5430	1	30	8681	WPA
W2NPT	1714	2	49	6810	NNJ
W3B	1418	2	30	4876	WPA
W3CU	821	2	24	4248	MDC
W2AE	795	2	43	4060	WNY
W3M	868	2	45	4008	MDC
W2CM	794	2	20	3836	WNY
K3AE	808	2	37	3732	EPA
W2OFQ	531	2	28	3390	WNY
WA3COM	800	2	22	3050	WPA
W2CRA	657	2	24	2802	NNJ
W3DE	838	2	20	2610	DE
W3ACH	604	2	48	2578	WPA
W2FHA	305	2	15	2396	WNY
W3NWA	496	2	32	2386	EPA
KD2KWT	418	2	10	2202	NNJ
NY2U	407	2	18	2106	ENY
W2OW	110	2	12	1442	WNY
K3CAL	286	2	15	1434	MDC

Comparative Statistics

Year	Score	QSOs	Cat	Location	Prt	GOT
2018	4,008	868	4A	Damascus	45	KV3B
2017	5,492	1,486	5A	Damascus	36	KV3B
2016	4,856	1,263	5A	Damascus	40	KV3B
2015	2,466	375	4A	Damascus	31	KV3B
2014	3,140	650	4A	Damascus	45	KV3B
2013	7,444	1,953	4A	Davis A/P	43	KV3B
2012	5,880	1,350	3A	Davis A/P	46	KV3B

Get-On-The-Air (GOTA-KV3B) Station Capt. N3ADE

Name	Call	QSOs	BonusPts	Total
Beth	None	3	0	3
Gabriela	None	1	0	1
Jack	KC3JML	1	0	1
Michael	KC3JV	1	0	1
Andrew	KC3KFU	1	0	1
Lee	KC3LLG	1	0	1
Rebecca	KC3LLI	1	0	1
Victoria	KC3LLP	1	0	1
John	KJ4KPW	3	0	1
Vanya	None	30	40	70
Daniel	W3HDB	29	40	69
		72	80	139

BRAGGING RIGHTS

Op	3.5	7	14	21	50	Pts	Q	Pts	Mode
K3LO	0	124	0	0	0	124	2	248	CW
W0MMM	0	121	106	7	0	234	1	234	Phone
AB3CR	83	25	7	0	0	173	1	173	Phone
N4DR	0	77	2	0	0	79	2	158	CW
K3TC	0	34	0	0	0	34	2	68	CW
KB3WKK	1	0	66	0	0	67	1	67	Phone

Following operators also contributed to our QSO count:

WB2U – CW, K3ICI – Digital, N3ESR – Phone, KC3LLI – Phone, N3ADE - Phone

Miscellany

Winter Field Day

January 26 – 27 2019

Winter Field Day Association (WFDA) is a dedicated group of Amateur Radio Operators who believe that emergency communications in a winter environment is just as important as the preparations and practice that is done each summer but with some additional unique operational concerns.

Like entities of ARRL Organizations such as ARES & RACES, maintaining your operational skills should not be limited to fair weather scenarios. Adding Winter Field Day to your yearly exercises will enhance those already important skills you and others generously volunteer during emergencies. WFD is open to all licensed amateur radio operators worldwide.

Disasters are unpredictable by nature and can strike when you least expect them. WFDA's goal is to help enhance your skills and ready you for all environmental conditions found in the US and Canada during the spring, summer, fall and winter. Preparedness is the key to a professional and timely response during any event and this is what local and state authorities are expecting when they reach out to the emergency service groups that offer their services.

If you are serious about emergency communications consider operating this yearly event. If you do, the *MARC Proceedings* will welcome your reports. (Above comments were extracted from the WFDA website)

2019 WFD Rules
Purpose: To foster Ham camaraderie, field operation, emergency operating preparedness, and just plain on the air, outdoor fun in the midst of winter for American, Canadian and DX Amateurs. Don't let those winter doldrums keep you locked up in the house… get out and play some radio!!
When: Winter Field Day runs for 24 hours during the last full weekend in January each year from 1900 UTC (2pm EST) Saturday to 1900 UTC (2pm EST) Sunday. For 2019, the dates are January 26th and 27th. Station set-up may commence no earlier than 1900 UTC (2pm EST) on Friday, January 25th. Station setup may consume no more than 12 hours total. How & when you schedule/spend those 12 hours is up to you.
Bands: All Amateur bands, HF, VHF, & UHF except 12, 17, 30 and 60 meters.
Modes: Any mode… CW, SSB, AM, FM, DStar, C4FM, DMR, Packet, PSK, SSTV, RTTY, Olivia, Satellite, etc…
Categories include operating outdoors, indoors and from home. For complete rules visit https://www.winterfieldday.com/rules.

FIRST CONTACT

The ARRL provides a "First Contact" certificate commemorating that special first on-the-air contact. It comes completed with the contact information that you provide by filling out a form. This would be a wonderful surprise to send a ham when you are THEIR first contact. If you think you may be someone's first contact be sure to jot down the date, time, frequency and mode. You will need to find the person's mailing address. Then go to http://www.arrl.org/first-contact and fill out the form.

WANTED

Pictures!

Pictures of your shack, your equipment, QSL cards, antennas, portable ops from interesting locations. Your picture should accompany a description or story about your photos. Hopefully we will feature a different picture every month.

Writers!

We are looking for any ***MARC Proceedings*** subscribers who can write a short article. The article can be a story about almost anything amateur radio related, but especially about MARC activities. Choose your genre.

Elmers!

We need a few members who can write Elmering articles for our new club members and new hams alike. Everyone needs a little help getting started in amateur radio and MARC club activities. It would be great to have a dedicated column reserved for those, how-to, and similar articles.

MARC Club Logo

Club Logo. (Courtesy of Dave Stovall W3OM (ex WB3LHB)

from an email he shared with club members several years ago). The MARC logo was originally created for a T-shirt commemorating the MARC Field Day at the Montgomery Horse Farm in 1981. The illustration in the center of the logo is a tracing from a photograph of the raising of the 20 meter beam. The people around the base of the tower are Dave Halliburton, Chet Dean, Stan Staten, myself, and Steve Ehrreich. Out of view Tom Jones, Jerry Black, and Joe Lundholm were holding guy ropes. The T-shirt design was adapted to the cover of the MARC Directory in 1982 and was subsequently adopted as the official club logo.

NETS

Local Times unless otherwise noted

Net	Mode	Day and Time	Freq	PL	Purpose	Link
MARC Rapid Deployment Net	FM	Thur 8:00 PM	146.955	None	Rapid Deployment	Marcclub.org
MARC Sunday Net	FM	Sun. 7:30 pm	146.955	None	Information	Marcclub.org
Public Service Net	FM	Tue. 8:00 pm	146.955	None	Public Service & Emerg	Marcclub.org
MARC 6-M Net	FM	Tue 9:15 PM	53.270-	None	Information	Marcclub.org
Maryland Emerg. Phone Net (MEPN)	SSB-Voice	Daily 6:00 PM (winter times may apply)	3.820 MHz	N/A	Formal Traffic	http://mepn.n3wke.com/
Maryland Delaware DC Net (MDD)	CW	Daily 7:00 pm & 10:00 pm	3.557 MHz	N/A	MDC Section Traffic	http://www.arrl-mdc.net/mdd_net/net.htm
Maryland Slow Net (MSN)	CW	Daily 7:30 pm	3.563 MHz	N/A	Training & Traffic	http://www.bdb.com/~msn/
Baltimore Traffic Net (BTN)	FM-Phone	Daily 6:30 PM	145.330	?	Traffic	http://www.baltimoretraffic.net/
Empire Slow Speed (ESS)	CW	Daily 6:00 pm	3.569 MHz	N/A	Training & Traffic	http://eny.arrl.org/nts/eny-traffic-nets/
Radio Relay International East (RRIE)	CW	Daily 8:00 pm	3.552	N/A	Formal Traffic – Long Haul	https://radio-relay.org/