

*Look up!*

# ***The Aero Aerial***

The Newsletter of the Aero Amateur Radio Club  
Middle River, MD  
Volume 17, Issue 4  
April 2021

Editor Georgeann Vleck KB3PGN

## ***Officers***

President	Joe Miko WB3FMT
Vice-President	Rob Ballou AE3B
Recording Secretary	Larry Hill KB3QWC
Corresponding Secretary	Pat Stone AC3F
Treasurer	Warren Hartman W3JDF
Resource Coordinator	Ron Distler W3JEH

## ***Committees***

Repeater	Phil Hock W3VRD Jerry Cimildora N3VBJ Ken Erisman NE3A Dave Brunner AC3EO
VE Testing	Pat Stone AC3F
Public Service	Bob Landis WA3SWA
Webmaster, Facebook	Jerry Cimildora N3VBJ
Trustee:	Dave Fredrick KB3KRV (W3PGA) Jim Marshalek KC3FBL (AE3RO)
Club Nets	Joe Miko WB3FMT
Contests	Bob Venanzi ND3D

Website: <http://w3pga.org>

Facebook: <https://www.facebook.com/pages/Aero-Amateur-Radio-Club/719248141439348>

# About the Aero Amateur Radio Club

## Meetings

The Aero Amateur Radio Club meets at 7:30 pm on the first and third Wednesdays of the month at Essex SkyPark, 1401 Diffendall Road, Essex. Meetings begin at 7:30 p.m. local time. Meetings are canceled if Baltimore County Public Schools are closed or dismiss early.

## Repeaters

**W3PGA**      **2 M :**    INPUT : 147.84 MHz, OUTPUT : 147.24 MHz, PL 123.0  
**W3PGA**      **70 Cm:** INPUT : 444.575 MHz, OUTPUT : 449.575 MHz, PL123.0  
**W3JEH**      **1.25 M:** INPUT : 222.24 MHz, OUTPUT : 223.84 MHz

## Club Nets

Second Wednesday Net – 70 Centimeters (449.575 MHz Repeater) @ 8 p.m. Local Time  
Fourth Wednesday Net – 2 Meters (147.24 MHz Repeater) @ 8 p.m. Local Time  
Fifth Wednesday Net – 10 Meters (28.445 MHz) @ 8 p.m. Local Time

## Radio License Exams

The Aero Amateur Radio Club sponsors Amateur Radio License Exams with the ARRL VEC. Examination sessions are throughout the year. Walk-ins are welcome; arrive no later than 30 minutes after start time. \$15 charge.

### 2021 Examination Schedule DUE TO COVID-19 DATES May be **Canceled!**

Time:			1 pm
Dates:			Sat., May 15
Where:		American Legion, Rosedale	American Legion, Rosedale

American Legion Post 180, 1331 Seling Ave., Rosedale, MD 21237

Contact:      Patricia Stone AC3F, email: [ac3f@juno.com](mailto:ac3f@juno.com), landline: 410-687-7209

## LOCAL AREA NETS

Day	Time	Freq. (MHz)	Net Name
Daily	9 – 10 am	145.330	Oriole Net
Daily	6 pm	3.820	Maryland Emergency Phone Net
Daily	6:30 – 7 pm	145.330 no PL	Balto. Traffic Net (b/u 146.670 PL 107.2)
Daily	7 pm & 10 pm	3.643	MD/DC/DE Traffic Net
2 <sup>nd</sup> Tue	7:30 pm	146.670	Baltimore County RACES Net
2 <sup>nd</sup> Wed	8 pm	449.575	Aero ARC Net
4 <sup>th</sup> Wed	8 pm	147.240	Aero ARC Net
5 <sup>th</sup> Wed	8 pm	28.445	Aero ARC Net
Fridays	7:30 pm	145.330	Back in the Day Net
When activated by NOAA		147.030	SkyWarn (primary)

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## CLUB MEETINGS

### 03/03/2: Aero ARC ZOOM Meeting Notes

07:00 pm to 08:07 pm

**Members Present:** Rob AE3B, Don K3DON, Joe WB3FMT, Bob WA3SWA, Harry AC3EK, Gus AA3GG, Rich KB3VAE, Larry KB3QWC, Don N3FQC, Steve KD3TP, Kurt WA3TOY, Dave KB3KRV, Tom N3TJR, Lou KC3NMT, Lou AB3QK, Dave N3SOI, 16 members present

**Treasury Report:** Bank \$2,134.27 as of 3/2/21 On Hand: \$140.00 5 checks

**Repeater Report:** 2 mtrs: *No Problems* 70 cm: *No Problems*

**Correspondence:** Email from Harry AC3EK about ICOM 7300 firmware upgrades. Let me or Harry know if you need this info.

**Public Service:** We still need for our members to continue checking in with and helping neighbors and your fellow hams if possible.

**EmCOM:** SKYWARN Classes - To Check on or Register for the Online Classes, see the SKYWARN website. Currently as of March 3<sup>rd</sup>, there are no SKYWARN scheduled.

**VE Testing :** The American Legion Hall in Rosedale is the new testing location will be continued to be used for the near future. The AL Post is located at 1331 Seling Ave. Rosedale 21237. The following testing dates have been scheduled: Jan 16, Mar 20, May 22, Sep 18, and Nov 20. The Test session on Jan 16<sup>th</sup> had 10 participants and 9 passed at least one test. Pat already has **15** takers for the Mar 20<sup>th</sup> session at the Hall. Standard Covid-19 protocols will be followed.

**Old Business: Dues:** I still have some members that still owe dues for this year! If you are in questioned, send me an email at [joseph.miko@verizon.net](mailto:joseph.miko@verizon.net) or call me a 443-956-0197. Suggestion made by Bob WA3SWA to send an email to each of the 9 members to see if they have any records stating that they paid 2020 dues. That was done and a few have responded. I also sent out a second request to the remaining members.

**Club Contest:** Harry announced that the club's January contest has ended. Harry announced the 2021 winner, it was Bob Landis WA3SWA congrats to all the contestants, better luck next year. Next year Bob will make up the rules for the contest!

**Antenna Bill:** Tom Henry N3TJR reported on Feb 25<sup>th</sup> that the State of MD House passed HB663 the antenna bill 139 to 2. The 2 "No Votes" were abstentions due to a conflict of interest. Tom will let know its status as if moves to the State Senate.

## New Business:

- An additional work group will be tasked with removing the old 440 and 24 repeaters later.
- Jon and Marty are members of the same AL Post, and this post is interested in starting and building a radio station, AERO ARC may be able to help them out?
- The second meeting of the of the month is now a RAG CHEW featuring a short "YouTube" presentation about Ham Radio stuff. No meeting just Chew!
- Lou Smith is thinking about starting a CW practice session using ZOOM for people who can't reach Pat's Sunday night session. Check the email and get back to Lou, about your interest or comments.
- From Marty KB3MXM MDC SM - Monitoring Ham Bands for Malicious or Suspicious Radio Communication – Mar. 4<sup>th</sup> thru Mar. 6<sup>th</sup> heightened level of awareness for Wash. D.C. & adjacent MDC Counties. Social Media and News outlets report the possibility of additional gatherings, and likely in Washington D.C. So, there is an overall increase in Security and Law Enforcement awareness as well as D.C. .GOV awareness prior to Mar. 4<sup>th</sup> thru 6<sup>th</sup> – so we should do the same. If you hear something suspicious, please note freq. or VHF/UHF Repeaters/ Simplex or other linked Radio over IP (RoIP) e.g., EchoLink, DMR, D-Star, WIRES-X etc.

If anyone has any questions, please give me a call at 443-956-0197.

*jmm*

## **3/17/21: Aero ARC ZOOM Rag Chew Meeting Notes**

07:00 pm to 08:15 pm

**ZOOM Members Present:** Rob AE3B, Joe WB3FMT, Richard KB3VAE, Don N3FQC, Harry AC3EK, Pat AC3F, Tom WA3QLY, Lou KC3NMT, Gus AA3GG, Dave KA3SNY, Georgeann KB3PGN, Ken KB3JVP, Jerry N3VBJ, 10 members present

**Members Present at SKYPARK:** ROB AE3B, Joe WB3FMT, Richard KB3VAE, Don K3DON, Tom N3TJR, Bob WA3SWA, Jon N7JKR, Ray N3RES, Charles KA4ADL, Phil W3VRD, Marty KC3AID, 11 members present

1<sup>st</sup> **50/50** in a while, \$6 to a member, \$6 to the club

For this meeting there was a "YouTube" presentation about Final Amplifiers efficiency

Youtube link: [https://youtu.be/Mot17h\\_o\\_ro](https://youtu.be/Mot17h_o_ro)

Background: Ham Dave Casler, KE0OG, has a Thursday Night Q&A session from 9-10 pm on "YouTube". Here is the link to Dave Casler's "Youtube" home page:

<https://www.youtube.com/c/DavidCasler/featured>

Harry also sent me some additional links for other topics that I want to use in the upcoming second ZOOM RAG CHEW of the month. If you like the reports by Dave Casler let me know, and I will look for more of them! If you have any topics you would like to have discussed about RADIO, Astronomy or Weather or if you have seen a neat presentation and think the club would like it send me the link and we will run it for a Rag Chew meeting.

Stay well and be safe.

73,

Joe M

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## *Net Reports*

### **03-10-21: 449.575r, 20:00 to 20:29**

W3PGA Joe Essex, AC3F Pat Middle River, N3FQC Don Perry Hall, KB3QWC Larry Middle River, KB3VAE Richard Middle River, WA3QLY Tom Middle River, KB3JVP Ken Middle River  
7 people on the net

### **3-24-21: 147.24r, 20:00 to 20:19**

W3PGA Joe Essex, N3FQC Don Perry Hall, K3DON Don Joppatowne, KB3QWC Larry Middle River, W3VRD Phil Essex, KB3VAE Richard Middle River  
6 people on the net

### **3-31-21: 28.445 USB, 20:00 to 20:16**

W3PGA Joe Essex, N3FQC Don Perry Hall, K3DON Don Joppatowne, W3VRD Phil Essex  
4 people on the net



## *VE CORNER*

**by Pat Stone, AC3F**

Our next test session will be held on Saturday, May 15 at 1 pm in the American Legion Post 180 in Rosedale, Md. Hope to see you then.

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## Ham News

### Ham Radio Satellite Returns from the Dead

After 7 years of silence, the Delfi-n3Xt satellite is again transmitting a signal. The 3U Delfi-n3Xt nanosat, launched by Delft University of Technology (TU Delft), has not been heard since 2014, and its sponsors were surprised to learn that it was transmitting again. Delfi-n3Xt carries a linear amateur radio transponder. It was the second satellite launched by TU Delft, as part of the Delfi Program, which develops very small satellites. The first Delfi satellite, Delfi-C3, is still working as well. Now that Delfi-n3Xt is transmitting again, steps are being taken to further its mission. The Delfi-n3Xt project started in 2007, and the satellite was launched in November 2013. The satellite operated successfully for 3 months, achieving mission success. Contact with the satellite was lost in late 2014 after an experiment with the linear transponder.



When functioning properly, the Delfi-n3Xt satellite transmits telemetry on 145.870 MHz and 145.93 MHz, and high-speed data on 2405 MHz. The inverting SSB/CW transponder has an uplink passband of 435.530 - 435.570 MHz LSB and a downlink passband of 145.880 - 145.920 MHz USB. The ham transponder was a last-minute addition to the project.

On February 9, an automatic email notification was received from the satellite's ground station, indicating that a signal from the Delfi-n3Xt had been picked up. Student and ground station operator Nils von Storch said he'd programmed the ground station software so that it would continue to track Delfi-n3Xt and notify him if it ever came back to life. Relevant checks and analysis of telemetry frames prove the satellite is transmitting again. The reason it stopped transmitting has not yet been determined, and the big question now is how it was able to resume operation.

Hypotheses include a bit flip in the software or a short circuit, given the extreme conditions in space. "Of course, in the past, we have looked for all kinds of explanations, and we also had theories about how the contact could ever come back," nanosatellite program manager Jasper Bouwmeester, PC4JB, said. "But after so long, I hadn't counted on it anymore." Bouwmeester, who has been managing the mission since 2007, expressed confidence that the satellite can still be of use to science.

"But I am sure that we will be able to find solutions," operations manager Stefano Speretta said. "If we don't lose the signal again, there are interesting times ahead." -- *Thanks to AMSAT News Service and Delft University of Technology*

*Source: The ARRL Letter for March 18, 2021*

**Temporary Field Day Rules to Continue for 2021** – Home stations may again contact other home stations for credit but are limited to 150 watts power output

**Pandemic Prompts Surge in Ham Popularity in UK** – Interest in licensing courses and exams at record levels

Hams Help in Earthquake Research – Amateurs are being trained to use Winlink to help the U.S. Geological Survey track and better understand the impact of earthquakes

Details on these stories and more are online in the CQ Newsroom at <http://cqnewsroom.blogspot.com/> .

*Source: CQ Amateur Radio Newsroom Update 3/12/21*

## WWVB System Upgrade Announced

The National Institute of Standards and Technology ([NIST](#)) has announced that its [WWVB](#) transmission system is being upgraded to improve signal reliability. Many rely on the 60 kHz WWVB signal to synchronize specially equipped clocks and watches. NIST says the WWVB signal may operate on a single antenna at approximately 30 kW radiated power for several days, with periodic outages. Upgrades are expected to be complete by April 9.

*Source: The ARRL Letter for March 18, 2021*

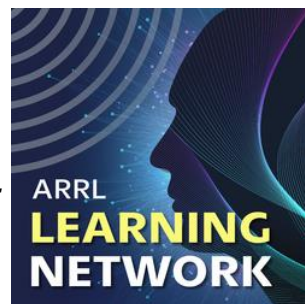
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## ARRL Learning Network Webinars

Visit the [ARRL Learning Network](#) (a members-only benefit) to register, check on upcoming webinars, and to view previously recorded sessions.

***The Art and Science of Operating Ultra-Portable -- Mike Molina, KN6EZE***  
**Tuesday, April 6, 2021 @ 8 PM EDT (0000 UTC on Wednesday, April 7)**

Ultra-portable operation is quickly growing in popularity. Whether for SOTA, POTA, backcountry survival, or just spending time in nature, learning how to operate ultra-portable is a fun and rewarding experience. In this presentation, Mike, KN6EZE, covers the basics for new and experienced ham radio operators.



***Finding and Fixing RFI -- Paul Cianciolo, W1VLF***  
**Tuesday, April 20, 2021 @ 1 PM EDT (1700 UTC)**

RFI (radio frequency interference) -- from natural and manmade sources -- has been a problem for hams and shortwave listeners since the radio hobby began. Things have changed in the last 20 years with the advent of widespread solar power, LED lighting, grow lights, and computers. The technology boom has enhanced our daily lives, but at what price? Learn all about finding and fixing RFI in today's world.

## **HF Noise Mitigation -- ARRL Northwestern Division Director Mike Ritz, W7VO**

**Thursday April 22, 2021 @ 3:30 PM EDT (1930 UTC)**

An educational seminar to help new and experienced amateurs who are on HF and finding themselves plagued with noise. We'll learn what "noise" is, talk about the various noise sources, and discuss how to mitigate those noises using a variety of techniques.

The [ARRL Learning Network](#) schedule is subject to change.

*Source: The ARRL Letter for March 18, 2021*

## **Online Courses Available**

**National SKYWARN® courses** are also offered online by COMET on their MetED site. These courses can be extra value to you however they do not replace the SKYWARN® Basics course taught by one of our meteorologists from the National Weather Service Baltimore/Washington. These online courses leave out vital information on the multitude of weather threats we get in the Mid-Atlantic region. Online - [https://www.meted.ucar.edu/training\\_course.php?id=23](https://www.meted.ucar.edu/training_course.php?id=23)

Also, check-out the "THE NATIONAL CAPITAL AREA SKYWARN SUPPORT GROUP"  
<https://www.wx4lwx.org/>

*Source: MDC Section News, Feb 2021*

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## **Hamfests**

### **NO NOTICE OF CANCELLATION AS OF 4/8/21**

#### **Sunday, June 20, 2021: Father's Day Hamfest at Arcadia**

Location: Arcadia Fairgrounds, 16920 Carnival Ave., Upperco, MD 21155

Website: <http://W3FT.com> [Facebook](#) [Baltimore Amateur Radio Club](#)

Sponsor: Baltimore Amateur Radio Club

Talk-In: 146.67 (PL 107.2)

Public Contact: David Shadwell , AB3TE, P.O. Box 120 Reisterstown, MD 21136, Phone: 410-252-2878,

Email: [W3FT@yahoo.com](mailto:W3FT@yahoo.com)

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# From the Skies over Mt. Essex

## SKY Events for April 2021

- Apr 3<sup>rd</sup>** - Double shadow transit on Jupiter. 16:23UT, 12:23 EDT.
- Apr 4<sup>th</sup>** - Last quarter Moon & Project OZMA, the 1<sup>st</sup> attempt to locate extraterrestrial intelligence in 1960.
- Apr 7<sup>th</sup>** - Double shadow transit on Jupiter. 04:15UT, 00:15 EDT  
**Apr 7<sup>th</sup>** - Double shadow transit on Jupiter 05:42UT, 01:42 EDT  
**Apr 7<sup>th</sup>** - Jupiter is 4°N of Moon 07UT, 03 EDT
- Apr 10<sup>th</sup>** - Double shadow transit on Jupiter. 19:01UT, 15:01 EDT.
- Apr 11<sup>th</sup>** - New Moon
- Apr 12<sup>th</sup>** - USSR's Yuri Gagarin became the first human in space in 1961.
- Apr 14<sup>th</sup>** - Double shadow transit on Jupiter. 08:21UT, 04:21 EDT.
- Apr 17<sup>th</sup>** - Mars is 0.1° N of the Moon 12UT, 08 EDT.
- Apr 20<sup>th</sup>** - First Quarter Moon
- Apr 22<sup>nd</sup>** - Lyrid meteors shower peaks 12UT, 08 EDT 20 per hour.
- Apr 24<sup>th</sup>** - Launch of the Hubble Space Telescope in 1990.
- Apr 26<sup>th</sup>** -- Full Moon, Traditional the Planters Moon, Celtic Growing Moon .
- Apr 27<sup>th</sup>** - Mars is 0.5° N of M35 Open Cluster in Gemini.

## Planet Lookout at mid-Month EDT

### Sunrise 06:27 EDT and Sunset 19:37 EDT

**Mercury -- Morning** Rises 06:23 Sets 19:17 Mag -1.7 and Size 5.0 arc seconds

**Venus -- Evening** Rises 06:46, Sets 20:01, Mag -3.9 and 9..8 arc seconds.

**Mars -- Evening** Rises 09:40, Sets 00:31, Mag 1.4 and 4.9 arc seconds.

**Jupiter -- Morning** Rises 04:00, Sets: 14:40, Mag -2.1 size 35.9 arc seconds.

**Saturn -- Morning**, Rises 03:20 Sets 13:33, Mag 0.7 size 16.3 arc seconds.

**Uranus— Evening** Rises 07:09, Sets 20:42; Mag 5.8 size 3.3 arc seconds.

**Neptune -- Morning** Rises 05:09 Sets 16:47; Mag 8.0 size 2.3 arc seconds.

## Please Bear with me... The Great Bear

The Constellation Ursa Major is the Great Bear and contains the asterism "The Big Dipper". It all started with Roman Mythology. One day a long time ago Jupiter was wandering the forest and was taken by the beauty of Callisto, a maiden. This got Jupiter's wife, Juno, incensed. Later, Juno found out that Callisto had given birth to a son, and she assumed that Jupiter was the father. This was centuries before the Murie show and who is the "daddy". In retribution, Juno transformed Callisto into a bear. Juno seeing her son Arcas she rushed over to him. Arcas thinking he was being attacked shot an arrow at the charging bear. Jupiter stopped the arrow. But realizing the wrath of Juno (the wife). Jupiter grabbed Arcas changed him into a bear and grabbed both the mother and son by the tail and hurled them into the heavens. The force of doing so lengthened the tails of both bears.

Ursa Major the Great Bear is a circumpolar constellation meaning for us it never sets. It can be seen year-round. The Big Bear rotates counterclockwise around the North Pole which is Polaris the end of the tail of the Little Bear.

According to the Naked Eye Stars by Richard Lampkin there are 71 stars visible in the Ursa Major Constellation of the 71 stars 6 are greater than +2.4, 14 are greater than +4.4 the remaining 51 are between +4.5 and +5.5 magnitude. Of the 50 Brightest Stars (Observers Handbook 2021) 4 of these stars are found in The Great Bear all being brighter than +1.74. Ursa Major is the second brightest with 4 stars on the 50 Brightest list. The size in the sky makes Ursa Major the 3rd largest of the 88-constellation covering 1279 square degrees the sky, which is 3.10% of the entire sky.

The unique thing between the Orion and Great Bear Constellations is **Nebulas in Orion** and **Galaxies in the Big Bear**, see the best in the sky with two constellations.

**Double Stars 4** - Mizar/Alcor, Alula Australis, 65, M40

**Carbon Stars 2** - RT and VY

**Red Dwarf 1** - Lelande 21185 Brightest red dwarf in the Northern sky

**Nebulae - 1** - M97 (Owl Nebula)

**Open Clusters - 2** - Star 19 (Broken Engagement Ring, Cr 285

**Galaxies - 24** - Irr G 3, S 19, E 2

**Galaxies Designations:** S Spiral, SB Barred Spiral, LG/SO - Disk with no spiral arms, E - Elliptical E0= Round, E7 lens, IG - Irregular

**Super Giant Stars - None**

(M = Messier, New General Catalog, IC Index Catalog, Sh Stewart Sharpless and vdB Sidney van den Bergh-Waterloo, Cr Per Collinder)

Open Cluster 1 - Cr 285 ; Planetary Nebula 1 - M97 OWL Neb.

Irr Galaxies 3 - M82, NGC 2976, NGC 3077 (colliding with M81)

Elliptical Galaxies 2 - NGC 5322, NGC 2768

Spiral Galaxies 19 - M81, M101, M108, M109, NGC 2681, NGC 2841, NGC2985, NGC3184, NGC3198, NGC3359, NGC3631, NGC3726, NGC3898, NGC3938, NGC3941, NGC3953, NGC4051, NGC4088, NGC4605

Grab yourself a copy of "*Objects In the Heavens*" by Peter Birren, A Sky & Telescope's "*Pocket Sky Atlas*" by Roger Sinnott, or the "*Atlas of the Stars*" published by Astronomy Magazine. With any one of these publications, you will find countless enjoyments looking at the best place in the sky! The Great Bear can be seen year-round.