



Tunnel of Blooms

The Aero Aerial

The Newsletter of the Aero Amateur Radio Club
Middle River, MD
Volume 15, Issue 5
May 2019

Editor Georgeann Vleck KB3PGN

Officers

President	Joe Miko WB3FMT	Repeater	Phil Hock W3VRD Jerry Cimildora N3VBJ
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		Contests	Bob Venanzi ND3D Charles Whittaker KB3EK

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.

2019 Examination Schedule

Time:	1:15 pm	12 noon
Dates:	Sunday, May 5	Saturday, June 22
Where:	White Marsh Library	Essex SkyPark, FBO Bldg.

White Marsh Library, 8133 Sandpiper Circle, White Marsh, MD

Contact: Patricia Stone AC3F, email: 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 nd Tue	7:30 pm	146.670	Baltimore County RACES Net
2 nd Wed	8 pm	28.445	Aero ARC Net
4 th Wed	8 pm	147.240	Aero ARC Net
5 th Wed	8 pm	449.575	Aero ARC Net
Fridays	7:30 pm	145.330	Back in the Day Net
When activated by NOAA		147.030	SkyWarn (primary)

From the President's Desk

QST ALL AERO ARC MEMBERS QST: New club net schedule

Please be advised the 10 meter net is moving from the 2nd Wednesday to the 5th Wednesday of the month. In its 2nd Wednesday's place will be the 440 net (449.575 PL 123.0). The 2 meter net will remain at the 4th Wednesday (147.24 PL 123.0)

OLD Net	New Net
2 nd Wed 10 meters	2 nd Wed 440 Net
4 th Wed 2 meter net	4 th Wed 2 meter net
5 th Wed 440 net	5 th wed 10 meter net

Any questions pls give me a call. 443-956-0197

Joe Miko 443-956-0197

Upcoming Aero Club Events

Sun 6/16 the Baltimore Amateur Radio Club is having a Hamfest at the Arcadia Carnival Ground in Upperco, MD. It runs from 8:00 am to 2:00 pm and costs \$5.

Fri 6/21 thru Sun 6/23 ARRL Field Day 2019 event, This year as in the past we will be set up in the community hanger for the weekend. Setup up is Friday the 21, Sat the 22, we do VE testing in the FBO, and remember this is the last of the old General test. The new General test starts on 7/1/19. FD19 starts at 14:00 local and runs for 24 hrs. Need help for setup, operating, and breakdown. On any support you can provide.

Sat 9/14 The Essex Skypark Wings and Wheels Fly-in. This event has airplanes and vintage cars on display. There are aircraft rides, for a fee, and food for sale. The Aero Club will also set up a communications display, running a radio, and information on Skywarn. We also need Aero member support for this event to staff and setup and breakdown. Cost is \$5.00 a car load.

Any questions please give me a call.

Joe Miko 443-956-0197



NET REPORTS

4-10-19: 449.575r MHz, 20:00 to 20:46 Local.

W3PGA NCS Joe Essex, KB3JVP Ken Middle River, KC3FBM Franklin Parkville, AC3F Pat Middle River, WA3RQD Coz Lutherville, AC3DX Bill Rosedale, KC3IPK Dave Balto City

7 club members on the net

This was the first 440 net in the new time slot. Starting with this net the new sequence will be 440 on the 2nd Wed, 140 on the 4th Wed, and 10 meters on the 5th Wed of the month.

4-24-19: 147.24r MHz, 20:00 local to 20:28 local.

W3PGA NCS Joe Essex, W3VRD Phil Essex, KC3FBM Franklin Parkville, KC3IPK Dave Baltimore, AC3F Pat Middle River, KC3CMS Dan Baltimore, KB3VAE Rich Middle River

6 members and 1 guest on the net.



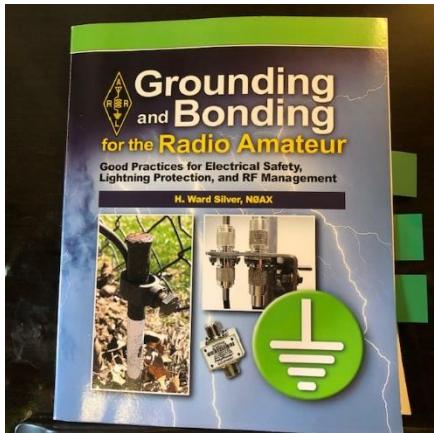
VE CORNER
by Pat Stone, AC3F

Our next test session will be held on Saturday, June 22, at 12:00 noon in the Essex SkyPark FBO Building. Hope to see you then.

Book Reviews: *Grounding and Bonding for the Radio Amateur*, and *Hints and Kinks for the Radio Amateur*

by Joe Miko, WB3FMT

Over the past 2 months I have purchased several publications from the ARRL. These books are an easy read and quite informative.



The first book is "*Grounding and Bonding for the Radio Amateur*", by H. Ward Silver, NOAX, ARRL Publication No. 0659, \$25.99.

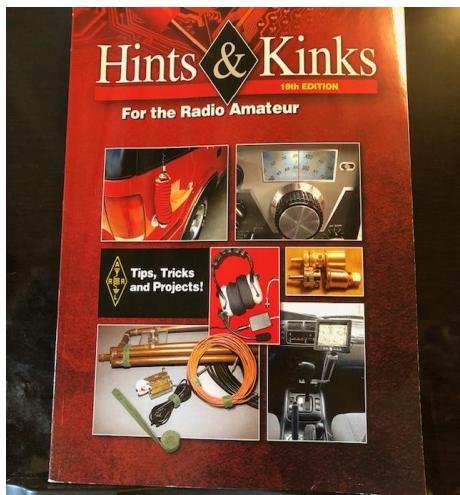
The book is for anyone who owns and operates an Amateur Radio Station, your first one or planning for your next one. The book is written by an engineer but in the language of a ham. It is the compilation of years of experiences, practical knowledge and electrical industry tidbits.

For most amateurs, the thought of grounding and bonding only comes in to play if you encounter a problem, most of the time its plug and play. This book explores three facets of electricity , Electrical Safety, Lighting Protection, and RF Management. I almost guarantee that we only think about 1 or 2 of these topics, but this book covers all three, and explains each one in a manner to get your attention. For example, on pages 3.6 and 3.7 the author explains Electrical Shock Hazards with AC and DC voltages. In the one page of voltages and currents listed, the effects can go from a tingle to severe burns and probable death and won't trip a 15 amp breaker.

The Lightning Protection section gives industry-proven installation hints to mitigate damages due to a near-by lightning strike. It also provides stats on antenna height vs. strike potentials. This section should be of interest because of the upcoming hurricane season and afternoon thunder storms.

The RF Management provides help full hints for laying out your new shack or fixing hum problems with your current shack.

Even if you don't need the book, you need it! It provides current industry and tried-and-true solutions for your Amateur Radio Station. It's a good reference, guide, and practical knowledge book, and the price ain't bad either.



The second book is "*Hints and Kinks for the Radio Amateur*," 18th Edition, ARRL publication No. 5200, \$22.95.

This book is the latest in a series of Hints & Kinks, a compilation of fixes and modifications to radio and test equipment used by amateurs. The Hints are divided into 11 chapters, but the repair topics are not in any order, this poses small problem. This is a

compilation of amateur fixes that might just be helpful for your problems? It's not a bad idea to have a second opinion on a problem!

The following is the table of contents of the book.

Forward

Units of Measure and Equivalents

- 1- Equipment Tips and Mods
- 2- Batteries and Other Power Sources
- 3- Mobile and Portable Stations
- 4- Software and Computers
- 5- Troubleshooting/Test Gear
- 6- Restoration
- 7- Construction/Maintenance
- 8- Antenna systems
- 9- Operating
- 10- Around the Shack
- 11- Interference (RFI/EMI)

There are over 390 topics covered in the 18th Edition of Hints & Kinks. To assist in finding a topic I made an EXCEL file and then sorted it by my index.

Example of sorted topics. Hints & Kinks. 18th Edition

Index	Topic	Section - Page
12v Adapter	12 V Spice Jar Adapter	7-21
300 Ohm Line	Make Your Own 300 Ohm Open Wire Feed Line	8-10
60 Meters	Adding 60 Meters To The MFJ-207 SWR Analyzer	5-2
600 Ohm Line	Make Your Own 600 Ohm Ladder Line	8-12
70 Cm	Add 70 Cm With A Coat Hanger	8-33
9913 Coax	Water Condensation In Air Dielectric 9913 Coax	8-23

The topics cover the IC706, Astron PS, Tuner Weatherproofing and many more topics. If you would like a copy of my EXCEL file, sorted or unsorted, give me a call at 443-956-0197, email me, or I can bring it to a club meeting.

From the Skies over Mt. Essex

SKY Events for May 2019

May 2nd – 4 Vesta a minor planet, mag +8.2 is 0.2° S of the Moon at 09:00 EDT.

May 4th – New Moon

May 5th – USA's Alan Shepard 1st American in Space aboard Freedom 7 in 1961.

May 6th - Eta Aquariid meteor shower peaks approx..50/hr.

May 10th – The Moon is in the Beehive M44 22:00 EDT

May 11th – First Quarter Moon

May 14th - USA's launched Skylab, America's 1st space station in 1973, reentered on 7/11/1979.

May 18th - Full "Flower" Moon, for Traditional and the "Moon when leaves are green" for the Dakota Sioux American Indian.

May 19th – Mars is 0.2° N of M35, Open Cluster in Gem. And 1 Ceres Mag +7.6 is 1.2° N of Moon at 18:00 EDT.

May 22nd – Saturn is 0.4° N of the Moon 18:00 EDT,

May 26th – Last Quarter Moon

Planet Lookout at mid-Month

Sunrise 05:54 EDT and Sunset 20:03 EDT

Mercury Morning Rise 05:36 EDT, Sets 19:27 EDT; Mag -1.5 and 5.1 arc seconds.

Venus Morning Rise 04:51 EDT, Sets 17:59 EDT, Mag -3.9, Arc Sec 11.1

Mars Evening Rises 08:03 EDT Sets 22:51 EDT, Mag 1.7 and 4.0 arc seconds wide.

Jupiter Midnight, rises 22:05 EDT, Sets 07:43 EDT; Mag-2.5 size 4.8 arc seconds.

Saturn Morning. Rises 00:05 EDT Sets 09:51 EDT; Mag 0.4 size 17.6 seconds.

Uranus Evening Rises 04:57 EDT Sets 18:13 EDT; Mag 5.9 size 3.3 arc seconds.

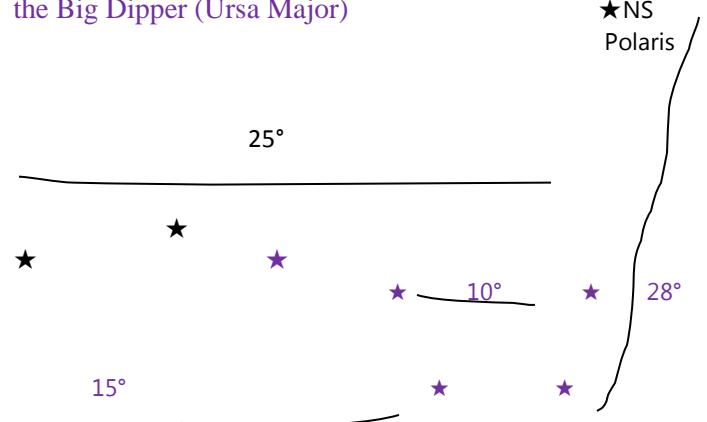
Neptune Morning Rises 03:04 EDT Sets 14:30 EDT; Mag +7.9 size 2.4 arc seconds

Measuring the Sky or part of it!

There is a simple way to estimate the apparent size and distances in space. All you need is your outstretched arm. First of all, the apparent size of the Sun and a Full Moon is $\frac{1}{2}^{\circ}$, your little finger a arm's lengths is 1° . Your 3 middle fingers equal 5° , make a fist and you have 10° . Need more? Spread your pinky (little finger) and index finger that makes 15° , and to make 20° spread your little finger and thumb.

As you are looking into space the Sun, Stars and Planets move 15° per hour.

You can also use Constellations as a guide! For example, the Big Dipper (Ursa Major)



The three stars in the belt of Orion are about 3° wide. That's over 5 Full Moons wide.

The Moon is on average 30 arc minutes wide, that's $\frac{1}{2}$ of a degree.

A quarter (15/16 inch) at 100 yards (300 feet) equals 1 arc minute.

A period ":" at 100 yards is 1 arc second and a Penney at 2.4 miles (3.8 km) is also 1 arc second..

It's not just your eyesight, even large Earth based telescopes are limited to what they can see. This is because of the Earth's atmosphere. The telescopes on Earth are limited to about $\frac{1}{2}$ mile resolution when looking at the Moon the Hubble in orbit can see something about 500 feet across.

Another limiting factor is how bright the object is, but that's another story.....