



*Wings and Wheels, Essex SkyPark, 2015*

## ***The Aero Aerial***

The Newsletter of the Aero Amateur Radio Club  
 Middle River, MD  
 Volume 12, Issue 10  
 October 2015

Editor Georgeann Vleck KB3PGN

### ***Officers***

President	Joe Miko WB3FMT
Vice-President	Bob Venanzi ND3D
Recording Secretary	Lou Kordek AB3QK
Corresponding Secretary	Chuck Whittaker KB3EK
Treasurer	Warren Hartman W3JDF
Resource Coordinator	Ron Distler W3JEH

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VE Testing	Pat Stone AC3F
Public Service	Bob Landis WA3SWA
Webmaster	Al Alexander K3ROJ
Trustee	Dave Fredrick KB3KRV
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 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  
**W3PGA**     **70 Cm:** INPUT : 444.575 MHz, OUTPUT : 449.575 MHz  
**W3JEH**     **1.25 M:** INPUT : 222.24 MHz, OUTPUT : 223.84 MHz

## Club Nets

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

### 2015 Examination Schedule

Where:        White Marsh Branch  
                  Baltimore County Public Library  
                  8133 Sandpiper Circle, White Marsh, Md. 21236  
Time:         1 p.m.  
Dates:        November 14  
Contact:      Patricia Stone AC3E, 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	Baltimore 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	28.445	Aero ARC Net
4 <sup>th</sup> Wed	8 pm	147.240	Aero ARC Net
5 <sup>th</sup> Wed	8 pm	449.575	Aero ARC Net
When activated by NOAA		147.030	SkyWarn (primary)

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## NET REPORTS

**9-9-15: 28.445MHz, 20:00 to 20:43 local.**

W3PGA Joe (NCS) Essex, KB3JVP Ken Middle River, KA3SNY Dave Essex, N3EKO Ron Parkville, NE3A Ken Middle River, KC3FBL Jim Parkville, W3VRD Phil Essex

**09-23-15: 147.240, 20:00 to 21:01 local.**

W3PGA Joe (NCS) Essex, KC3AID Marty Rosedale, KB3QWC Larry Perry Hall, KC3FBM Franklin Parkville, W3JEH Ron Perry Hall, N3VBJ Ron Dundalk, KC3ANJ Charles Dundalk, KC3APF Kelly Dundalk, KB3JVP Ken Middle River, KA3SNY Dave Essex, KC3FBL Jim Parkville

*Notes: The repeater is dropping power after about 1 ½ minutes, it's a design feature on this transmitter. There is a hardware fix, Ken is working on it. Also, Ron's 220 repeater will be offline this weekend (9-26/27) for routine maintenance.*

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## STATION ACTIVITIES

*by Joe Miko, WB3FMT*

Saturday, September 19, 2015 the SkyPark had its Wings & Wheels event. Aero participants were: Charles KC3ANJ, Kelly KC3APF, Jerry N3VBJ, Dave KB3KRV, Larry KB3QWC, Marty KC3AID, Joe WB3FMT, Lou, AB3QK, Pat AC3F, Eric KB3YJS (ten club members), and Jim KC3FBL who has not yet joined. Our guest visitor was Chris AB3WG, Net Manager for the Baltimore Traffic Net.

Radios used were an ICOM 7000 with a G5RV modified 52' long in an inverted V, a Yaesu 8900 for 2 m and 70cm and an HT using D-Star. Power for the event was provided by Charles' generator, with a home-made filter for reduced line noise. No noise was detected on either 40 or 20 meters.

Radio contacts: E Cars and S Cars nets along with approximate 35 HF contacts. Contacts included Aruba, Puerto Rico, Canary Islands, and Switzerland. Region 1 – 1; 2 -2, 3-0; 4-6; 5-1; 6-7; 7-11; 8-0; 9-0; 0-2. On digital w/D-Star Jerry contacted Spain along with 15 to 20 other contacts using reflectors.

Lunch and snacks were provided by Kelly and Charles (hot dogs, tortilla chips and a great Salsa.

A number of Aero members were onsite between 6:30 – 7:00 am for site setup. Breakdown started at 4:15 pm and was completed by 5:00 pm.

Jerry has posted photos on Face Book.

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## Upcoming Second Wednesday Presentations

These presentations will be given at the Essex SkyPark FBO building after the business meeting.

<i>Date</i>	<i>Topic</i>	<i>Presenter</i>
TBD	Contest Logging with N1MM	Bob V
TBD	ISS Sighting and Contacting	

*Any questions call Joe Miko at 443-956-0197.*

Presenters who wish to submit a description of their talk may email it to Georgeann at [KB3PGN@reagan.com](mailto:KB3PGN@reagan.com) for inclusion in the Aerial.

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## VE CORNER

*by Pat Stone, AC3F*

### Aero ARC VE 2015 Test Schedule

Where: White Marsh Library, 8133 Sandpiper Circle, White Marsh Md. 21236  
Time: 1 P.M.  
Dates: November 14

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

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## UPCOMING HAMFESTS and EVENTS

### **Saturday, October 3, 2015: Delaware State Convention (Delmarva AR & Electronics EXPO)**

Sussex Technical High School, 17099 County Seat Hwy., Georgetown, DE 19947. Website: [www.radioelectronicsexpo.com](http://www.radioelectronicsexpo.com)

Sponsor: Sussex Amateur Radio Association. Talk-In: 147.090 (PL 156.7)

Contact: Herb Quick, KF3BT, PO Box 1431, Seaford, DE 19973

Phone: 302-629-4949, E-mail: [herb@hamiltongraphics.com](mailto:herb@hamiltongraphics.com)

## **Sunday, October 4, 2015: CARAFest 2015**

Howard County Fairgrounds, 2210 Fairgrounds Rd, West Friendship, MD 21794

Website: <http://www.carafest.org>

Sponsor: Columbia Amateur Radio Association

Talk-In: 147.390 (PL 156.7)

Admission: \$6, Hours: 8 am - ?

Tailgating and vendors. Free VE exams. DX card checking.

Contact: David Parkison, KB3VDY, 1257 Stevens Avenue Arbutus, MD 21227

Phone: 410-977-1249, Email: [<vendorsales@carafest.org>](mailto:vendorsales@carafest.org)

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## **PUBLIC SERVICE OPPORTUNITIES**

### **Sunday, October 25, 2015: MARINE CORPS MARATHON**

The Marine Corps marathon needs 140 volunteer amateur radio operators to help with the 2015 marathon. First time volunteers should use the signup website at: [<mcmham.org/Volunteer/Signup.php>](http://mcmham.org/Volunteer/Signup.php). Those joining us again please use the Marine Corps Ham Sign-up at: [<www.mcmham.org>](http://www.mcmham.org).

At the end of the "ham" form, you will find a link to the MCM sign-up page. You will need to continue to the Marine Corps Marathon web site and fill out their form. Otherwise, you will not be signed up.

If you have problems with the web site, you may e-mail:

Howard Cunningham, WD5DBC, at [<howardc@macrolc.com>](mailto:howardc@macrolc.com).

Thank you for supporting the Marine Corps Marathon.

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# The Twinlead J-Pole

by Craig A. LaBarge, WB3GCK, abridged by Charles Ester, KC3ANJ

© 1998 by Craig LaBarge, used with permission. The full article and many others may be found at [www.qsl.net/wb3gck/jpole.htm](http://www.qsl.net/wb3gck/jpole.htm)

It is often necessary to squeeze every bit of performance possible out of a 2 meter Hand Held Radio. One way to do that is to replace that stock rubber duck antenna with. This simple antenna will work well for emergency use or as a portable antenna for hotel room operations while traveling.

## There are several features which make a Twinlead J-Pole antenna a good addition to your kit:

- When rolled up, it is an extremely compact, pocket-sized antenna.
- In use, it makes for a very effective antenna and provides about 3 db of gain.
- When used on your HT, it will dramatically out-perform your stock antenna.
- It can be built in no time flat for a few dollars of readily available materials.

## Here's what you'll need to build one for the 2 meter band:

- A 60-inch piece of flat TV twinlead. Use the inexpensive Radio Shack twinlead. Don't use the more expensive foam-filled line.
- 6 feet or more of coax cable. RG-174/U miniature cable makes for a very portable antenna but don't use more than 6 feet of it; it's very lossy. Use RG-58/U if you like, but it will be a bit bulkier.
- Ferrite bead, type 43 material (*optional - see below*)
- BNC connector (or other connector of your choice)

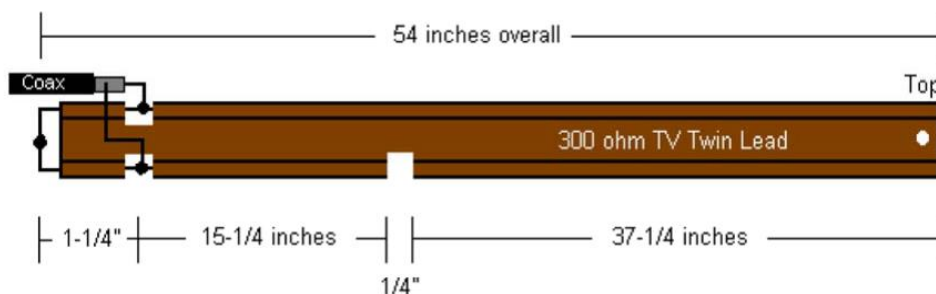


Figure 1. J-pole  
(Not to scale)

WB3GCK '98

## Here's how you build it:

1. Cut a 60 inch piece of twinlead and strip back about 1/2 inch from one end. Twist and solder the two wires together. Keep the connection as short as possible. This will be the bottom of the antenna.
2. Measure up 1-1/4 inches from the bottom and carefully remove the insulation, exposing both wires, as shown in Figure 1. Keep the notches small (1/8" or so) and be careful **not to cut the wires**. This is where we will be attaching the coax later.
3. Attach your coax as shown in Figure 1.
4. Measure up 15-1/4 inches from the point where the coax braid is attached and make a 1/4-inch notch. This time, you want to cut through the wire. Only cut one notch and make sure it is on the side where the braid is attached. This will form the 1/4 wave matching section.
5. Tape the coax to the twin lead for strain relief. Also, tape all solder connections and add some tape at the 1/4-inch notch for added strength.
6. Now, measure up from the bottom of the antenna and cut it to an overall length of 54 inches.

Punch a small hole in the top of the antenna. Use fishing line or other non-conductive line through the hole for hanging. Just unroll and hang it up, and communicate.

# From the Skies over Mt. Essex

## SKY Events for October 2015

Oct 4<sup>th</sup> - Last Quarter Moon, USSR launched Sputnik 1 into orbit in 1957 and on Oct 7<sup>th</sup> – USSR's Luna3 photographs the backside of the moon in 1959.

Oct 8<sup>th</sup> – Venus is 0.7° N of Moon at 17 EDT

Oct 9<sup>th</sup> - Jupiter , Mars and Moon make a tight triangle in the dawn sky

Oct 11<sup>th</sup> – The Zodiacal Light is visible in the East before morning twilight, for the next two weeks.

Oct 12<sup>th</sup> -- New Moon and *Uranus* is at opposition.

Oct. 16<sup>th</sup> – Mercury greatest elongation W (18°)

Oct 17<sup>th</sup> – Dawn Mars is ½° from Jupiter next two days.

Oct 20<sup>th</sup> - First Quarter Moon .

Oct 21<sup>th</sup> – Orionid meteor shower next two days.

Oct 25<sup>th</sup> – Dawn Venus is 1.1° from Jupiter

Oct. 26<sup>th</sup> – Venus greatest elongation W (46°) Dawn

Oct 27<sup>th</sup> - Full Moon “**Blood Moon**” for the English Medieval and the “**Hunter Moon**” for the Colonial American.

## Planet Lookout at mid-Month

**Sunrise 07:16 EDT and Sunset 18:27 EDT**

**Mercury** at Dawn rises at 05:45 EDT, magnitude 0.3 and 8.1 arc seconds.

**Venus** High at Dawn rises 03:30 EDT, magnitude -4.6 and 28.8 seconds.

**Mars** High at Dawn rises 04:00 EDT, magnitude 1.8, size 4.0 arc seconds.

**Jupiter** Dawn, rises 04:06 EDT, Magnitude -1.7 size 31.8 arc seconds.

**Saturn** Dusk sets at 20:29 EDT, Magnitude +0.6 size 15.6 arc seconds.

**Uranus** – Rises about 18:13 EDT, Magnitude 5.7, Size 3.5 arc seconds.

**Neptune** Visible all night, rises at 16:35 EDT. Magnitude +7.9 size 2.4 arc seconds.

## All that Glitters!

In space nearly everything that we see is either radiating or reflecting. The Sun, stars and galaxies are radiating (producing their own light) and the Moon, planets, comets and satellites are reflecting (bouncing a radiating light source).

This is October, and the month that the 1<sup>st</sup> satellite called Sputnik 1 was placed into orbit by the USSR in 1957, 58 years ago. Man has been looking up to catch a glimpse of Earth satellites. We see the satellites because they reflect sun light, but this is based on the altitude and ground track position of the satellite. The altitude of a satellite is the number of miles above the Earth and the ground track position is the position above the surface of the Earth. For example when the International Space Station is directly above Atlanta, GA it's altitude in Baltimore, is about 10 degrees.

Since these objects reflect sunlight there is an approximate 2hr 24 min window before sun rise and after sun set where sunlight will reflect off of the satellite. Of the objects in space there is an estimated 19,000 plus objects 4 inches or larger orbiting the Earth. As of 2009, there were a minimum of over 900 operational satellites.

There are a number of satellites that can be seen from the Earth almost on a daily basis, they are: Iridium flares, bright short lived reflection of sunlight from antennas, spent rocket boosters and spacecrafts.

The largest manmade object circling the Earth is the International Space Station, its' the size of a foot ball field.

To find out where and when these objects are visible go to the web site: [www.heavens-above.com](http://www.heavens-above.com), it's a free site, where you enter your location or coordinates and then access the Satellites menu, to get results for your area. The program produces a sky chart, showing the sky path of the object with nearby stars and a ground track, to show your distance from the satellite. Enjoy and happy spotting! The example is for July 18, 2015 at 03:27:23 . Stats are given for the current date plus 10 days.

