



In a Galaxy far, far away ...

The Aero Aerial

The Newsletter of the Aero Amateur Radio Club
Middle River, MD
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Editor Pro Tem Georgeann Vleck KB3PGN

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Website: <http://home.comcast.net/~frank-stone/Aero%20ARC/aero.htm>

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 Coffman's Diner, located at Middle River and Orem's Rds. and Fuselage Ave. in Aero Acres. Meetings begin at 7:30 p.m. local time.

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.

2014 Examination Schedule

Where: White Marsh Branch
 Baltimore County Public Library
 8133 Sandpiper Circle, White Marsh, Md. 21236

Time: 1 p.m.

Dates: September 27, November 22

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	147.33	Oriole Net
Daily	6 pm	3.820	Maryland Emergency Phone Net
Daily	6:30 – 7 pm	146.670	Baltimore Traffic Net
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
When activated by NOAA		146.670	SkyWarn

Repeater-mania

a trip down memory lane *by AC3P*



W3PGA REPEATERS

Prior to 1970 most amateur radio VHF communications were confined to six or two meters. Since the Technicians of the day had no HF privileges, the voice mode was amplitude modulation. There was some FM but it was restricted to converted commercial gear. All of the QSO's were simplex, point-to-point. Most stations consisted of some sort of AM transceiver or a transmitter/receiver combination with frequency converters to get on VHF. Antennas were primarily horizontally polarized, whether a dipole, halo, yagi or quad. DX was anything over 50 miles.



VHF AM Transceiver

In the early 70's manufacturers began marketing radios capable of frequency modulation. The early models were crystal controlled and channelized like CB sets. This made them ideal for mobile operation. The only problem was how to extend the range. Enter the repeater.



Early 2 meter FM Transceiver

Many clubs across the country began to setup repeaters on whatever high location could be found. The FCC rules at the time required a separate station license for a repeater and issued distinctive call sign with a WR prefix.

In the Baltimore area there were several repeater systems. The Aero club established one on 147.24 MHz. The BRATS club set up shop on 147.03 MHz. BARC established its machine on 146.67 MHz.

In the mid 1970's the BARC system was probably the predominant in the region. It had several receive sites

around the city and county. The transmit antenna was located on TV Hill on a 450 foot tower. It also had an autopatch feature that members used to connect to the Bell Telephone System. At one point there was a “reverse autopatch” that allowed someone to call a phone number and bring up the repeater. Then a member would transmit an access code to answer the phone. It was cell phone before there were cell phones. The reverse feature got shut down by the FCC Field Office rather quickly though.



Outboard Touch-tone



Touch-tone in mic



Touch-tone in HT

The other repeater systems throughout the country had similar features. For about a 10 year run one could hear the usual “rush hour” traffic peaks as two meters crackled with activity. Local nets would handle formal traffic or there would be round-tables with stations conversing. Occasionally old-timers would shake their heads as a newcomer would bring 10 Codes from that other service on the frequency.

With coming of cellular telephones it seems that the daily repeater activity has slowly dwindled. One or two QSO's might be heard during the day. Most clubs have taken down the autopatch link. But the machines still hold the frequency waiting for that call, whether an emergency request for help, a public service event or old friends wanting to chew the rag.

Speaking of Repeaters ...

It's old news that our 2-meter repeater is down, and Phil W3VRD is busy trying to repair it. Meanwhile, Joe WB3FMT and Frank AC3P have experimented with a backup system. It consists of two Yeasu FT-8900 transceivers in cross-band repeat mode. The receive site is at Joe's location and the transmit site is at Frank's QTH. The radios are linked on the 440 band.

Since there is no automatic ID, users must include "via W3PGA" when IDing. There is a 2 minute timer. The configuration is up only during the day when either Joe or Frank can monitor activity.

When the regular repeater returns to service, this back-up will shut down.

Further ...*from Joe Miko WB3FMT*

Thanks to Frank for coming up with a solution for the downed 2 meter repeater. Use a pair of Yaesu 8900's in crossband mode using 440 repeaters input frequency as a link between Joe's House and Frank's house.

AERO 2 Meter Repeater 147.84 Tx / 147.24 Rx

Yaesu 8900 Primary Location (Receive Site) Joe's House

444.575 MHz Repeater I/P Chan 406	AERO Repeater Receive 147.84 MHz CH 410
Set CTSS Tone 100.0 TX&RX (Menu #39)	Mute On RX (Menu #24)
Power Set Low or Mid	Set Cross-Band ON (Menu #44)
Yaesu 8900 Left Side	Yaesu 8900 Right Side

Yaesu 8900 Secondary Location (Transmit Site) Frank's House

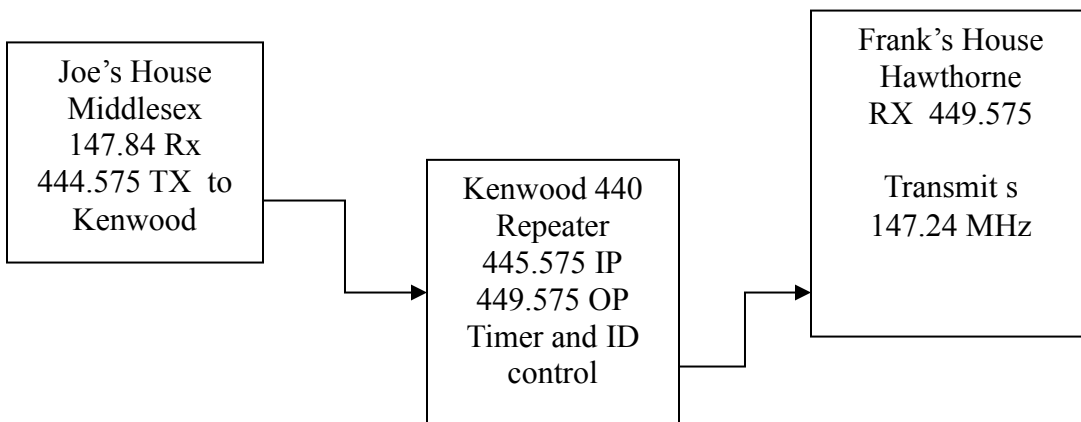
449.575 MHz Repeater O/P	Aero Repeater Transmit 147.24 MHz
Tone 100 Receive	Tone Transmit
Power Low	Power Low or Mid
	XMT Timer set at 2 min (Menu # 41)
Set Cross -Band ON Menu #44)	
Yaesu 8900 Lift Side (Channel)	Yaesu 8900 Right Side (Channel)

The Primary location Joe's house receives the signal from near the repeater's receive site at Kenwood High School.

The 8900 transmits a simplex signal 444.575 MHz (440 repeater I/P frequency) from the Primary location (receive site Joe's House) to the Secondary location (transmit site Frank's house).

The Secondary location in cross band mode receives the O/P signal from the 440 repeater (449.575 MHz) and retransmits it on the AERO's 2 meter repeater input frequency of 147.24 MHz.

The timer and Repeater ID is provided by Aero 440 repeater.



NET REPORTS

07-30-14: 449.575 MHz, 20:00 to 20:24 local.

W3PGA (NCS) Joe Essex, W3JEH Ron Perry Hall, AC3P Frank Middle River, KB3VAE Rich Middle River

08-13-14: 28.445 MHz.

AC3P (NCS) Frank Middle River and W3VRD Phil Essex

08-27-14: 147.240 MHz, 20:00 to 20:30 local.

W3PGA NCS Joe Essex, KB3VAE Rich Middle River, N3VBJ Jerry Dundalk, AC3P Frank Middle River, KB3PGN Georgeann Essex, KA3SNY Dave Essex, W3VRD Phil Essex

STATION ACTIVITIES

By Frank Stone AC3P

August 9 Open Cockpit Event at the Glen L. Martin Aviation Museum were Warren W3JDF, Jerry N3VBJ, Charles KB3ANJ, and Rich KA3VAE.

Phil W3VRD took the 147.24 repeater off the air on 8/13/14, pulled the transmitter, and is repairing it at home.

Pat AC3F has taken another carload of projects to the State Fair. No electronics were injured in this endeavor.

Frank AC3P has updated the Website.

Joe WB3FMT compiled an AERO ARC Callbook file which has been added to the Webpage. Frank also has added a visitor counter to see how much the site is accessed.

A speedy recovery to Warren W3JDF and Georgeann KB3PGN.

Welcome to new member George Blevins KB3TBH.

PUBLIC SERVICE REPORT – August Open Cockpit

by Jerry Cimildora N3VBJ

Warren Hartman W3JDF, Charles Ester KC3ANJ and Puppy dog, and Jerry Cimildora N3VBJ participated in public service event on August 9th, 2014 at the Glen L Martin Aviation Museum “Open Cockpit Day” at the Glen L Martin Airport using the 147.240 MHz club repeater. We had 71 cars over the four hours before the heaven’s opened and drenched us all who were not under cover. Open Cockpit is finished for 2014. In 2015 Open Cockpit Days will be on the first Saturday of May through August.



Figure 1. The Huey

The Aviation Museum has a new aircraft – a HUEY AH64U First Calvary. It was a trainer used in Korea and Vietnam. It is on loan from the Veterans Administration and will be restored by the Museum. It was manufactured in 1964 and was involved in a crash. The front has already been replaced, and Museum staff plan to restore it to its original look.



Figure 2. Museum Interior



Figure 3. The flight line

N3P SPECIAL EVENT – Battle of North Point, Sept. 13-14



Everyone knows about the Fort McHenry/Star Spangled Banner Bicentennial for this September. BARC is running a special event station to commemorate it. But there was a lesser known event going on that September in 1814 which was a lot closer to home for the Aero ARC.

While the British were busy bursting bombs in the air over the fort, they had also landed troops at North Point.

The British army was making its way toward Baltimore and encountered an American militia along the way. During the Battle of North Point British General Ross was killed by American snipers which delayed the advance toward the city. Eventually the British withdrew their troops and sailed away.

To commemorate the Battle of North Point, the Aero ARC will be operating Special Event Station N3P from 00:00 UTC September 13th to 23:59 UTC September 14th. We need operators who can operate from their home stations using the special event call sign. Time slots are open for the entire event. To volunteer, contact Frank AC3P by email ac3p@arrrl.net with your most convenient time for operation.

This event will appear in the September issue of QST, and on the ARRL website at www.arrrl.org/special-event-stations



VE CORNER

by Pat Stone, AC3F

Our next test session is scheduled **for 1 pm, September 27, 2014** at White Marsh Library. Fee is \$15.

PUBLIC SERVICE OPPORTUNITIES

SATURDAY, SEPT. 20, 2014: Wings & Wheels @ Essex Skypark (Fly in or Drive in)
10 am – 5 pm

This annual event features vintage, experimental, and light sport aircraft as well as custom and vintage cars, food and music.

The Aero ARC has again been invited to set up a ham radio display. Anyone interested in participating, please contact Joe Miko at 443-956-0197 (cell).



FRIDAY, Sept. 12, 2014, RAGANAR RELAY RACE, Hancock, MD

RAGNAR is a team relay running race that begins in the Cumberland, Maryland area and ends in Washington, DC. In the past, the Antietam Radio Association in Hagerstown has provided amateur radio coverage from just west of Hancock, Maryland to Fort Frederick. The remaining portions of the race are provided by cell phone.

Butch Eigenbrode (NI2W) needs a couple of volunteers to man the check point in Widmyer Park in Hancock. There are two shifts: 1:00 PM to 5:00 PM and 5:00 PM to 10:15 PM (or whenever the last runner passes through this check point). A net controller from 8:00 PM to 12:00 midnight on September 12 may also be needed. Extra folks at each post would also be appreciated.

Contact Butch by email: [<mee42@myactv.net>](mailto:mee42@myactv.net), 301-824-5373 (home), 908-343-1704 (cell)

SATURDAY, Nov. 22, 2014: ANNUAL JFK RUN, WASHINGTON COUNTY

Butch Eigenbrode (NI2W) is looking for volunteers to provide communications along the route. This communication support consists mostly of coordinating pick-ups of runners dropping out early, as well as finding runners.

The JFK is a fifty mile run held annually. In general, the run begins in Boonsboro and uses route US-40 ALT to Turner's Gap, transitions to the Appalachian Trail and continues south to the C&O Canal, continues on the C&O Canal Towpath to Dam #4, where it takes local roads through Downsville and ends at the middle school in Williamsport.

The hams from the Antietam Radio Association (ARA) and other volunteers have participated for many years. This Run is their biggest public service event.

So if you can help, please contact Butch Eigenbrode (NI2W) by email at [<mee42@myactv.net>](mailto:mee42@myactv.net), at 301-824-5373 (home) or 908-343-1704 (cell).

T-MARC Frequency Coordination Report for July, 2014:

Applications in Process

KA4DCS

- Received application for move of unpublished 449.xxxx- repeater from Alexandria, Va. to Culpeper, Va. and also a freq. swap of same pair to 444.xxxx+.
- Sent Notice of Proposed Coordination to neighboring coordination groups.
- Awaiting testing.

Bristol Emergency Amateur Repeater System

- Received application for move of 448.7250- from Bethany Beach to Roxana, Delaware.
- Sent Notice of Proposed Coordination to neighboring coordination groups.
- Sent revised coordination.

Shenandoah Valley ARC

- Received application for move of 146.8200- in Winchester, Va.
- Sent Notice of Proposed Coordination to neighboring coordination groups.

Worcester County Emergency Services

- Received application for coordination for 2 meter pair at Ocean Pines, Md.
- Sent Notice of Proposed Coordination to neighboring coordination groups.
- Sent Construction Coordination for 145.1900- at Ocean Pines, Md.

On Air Status Requests sent to:

- 147.0150- Tri-Co Ocean City, Md.
- 443.1875+ K3OCM Mechanicsville, Md.

Other: South East Repeater Association:

- Received 1 proposed coordination for 6 meters
- Received 1 proposed coordination for 440

Contact: e-mail [<tmarc@tmarc.org>](mailto:tmarc@tmarc.org), address: T-MARC, P.O. Box 1022, Savage, Md. 20763-1022, website: [<http://tmarc.org/>](http://tmarc.org/)

Source: MDC Section News

UPCOMING HAMFESTS

Saturday, October 4, 2014 – Delmarva Amateur Radio & Electronics EXPO and ARRL Delaware Convention, 7:30 am – 3 pm, Talk-in 147.09 (156.7 Hz)

Sussex Technical High School, 17099 County Seat Hwy (Rt. 9), Georgetown, Delaware. Admission \$5. Retailers include Ham Radio Outlet (HRO) and Quicksilver Radio, along with many regional and local vendors. Tailgating.

The guest speaker/forum program includes Bob Bruninga W4APR, who will update us on the latest in APRS technologies and operational applications. Other speakers will address redundancy and reliability in power and communications. Also good food (Delmarva chicken), VE testing for all license classes. www.radioelectronicsexpo.com/
Info: Paul Ross at 302-569-1618 or email Paul@nr3p.com

Sunday, October 5, 2014 – CARAFest (Columbia Amateur Radio Association)

Howard County Fairgrounds, 2210 Fairgrounds Road, West Friendship, MD 21794
Talk-In: 147.135/R- (PL 156.7)

Website: <http://carafest.org>

Info: David Parkison, KB3VDY, Phone: 410-977-1249, Email: trainman195@gmail.com

Saturday, October 25, 2014 – Southern Maryland Tailgate Fest (St. Mary's County ARA)

Hollywood Volunteer Fire Dept., 24801 Three Notch Road, Hollywood, MD 20636
Talk-In: 146.64 (PL 146.2)

Website: www.k3nhk.org

Info: Ken McNeely, KB3YPY, Phone: 301-862-4105, Email: ken.mcneely@yahoo.com

Sunday, October 26, 2014 – MASON DIXON HAMFEST (Carroll County Amateur Radio Club)

Carroll County Agricultural Center, 706 Agriculture Center Drive, Westminster, MD 21157

Talk-In: 145.410 (PL 114.8)

Website: <http://www.qis.net/~k3pzn>

Info: Steve Beckman, N3SB, Phone: 410-876-1482, Email: n3sb@qis.net

From the Skies over Mt. Essex

SKY Events for September 2014

Sept. 2nd- First Quarter Moon.

Sept. 5th – Regulus is 0.8° from Venus 08:00 EDT.

Sept. 8th - Full Moon . “Singing Moon” for the Celtic and the “Full Corn Moon” Traditional Full Moon Names, also the Hunter Moon.

Sept. 10th – Uranus is 1.1° South of the Moon 22:00 EDT

Sept. 15th - Last Quarter

Sept. 20th – Mercury is 0.6° South of Spica 21:00 EDT

Sept 21th – The Zodiacal light is visible in N. Lat in the East before morning twilight, for the next two weeks.

Sept. 22nd – Fall Equinox N Hemisphere 22:29 EDT

Sept. 22nd – Mercury at greatest Eastern elongation 26°.

Sept. 24th - New Moon.

Sept. 27th – Ceres a Dwarf Planet (asteroid) is 0.1° N of the Moon at 21:00 EDT.

Sept 28th – Saturn is 0.7° South of the Moon 00:01 EDT

Planet Lookout at mid-Month

Sunrise 06:48 EDT and Sunset 19:13 EDT

Mercury in the Evening Sky very low in the West sets 20:03 EDT, magnitude +0.1; 6.3 arc seconds.

Venus – In the East at dawn, rises about 05:56 EDT magnitude -3.9 and 10.5 arc seconds.

Mars- SW sky at dusk, sets about 22:07 EDT, magnitude +0.7 and 6.4 arc seconds wide.

Jupiter- In the East at Dawn, magnitude -1.8 size 32 arc seconds, rises 03:26 EDT.

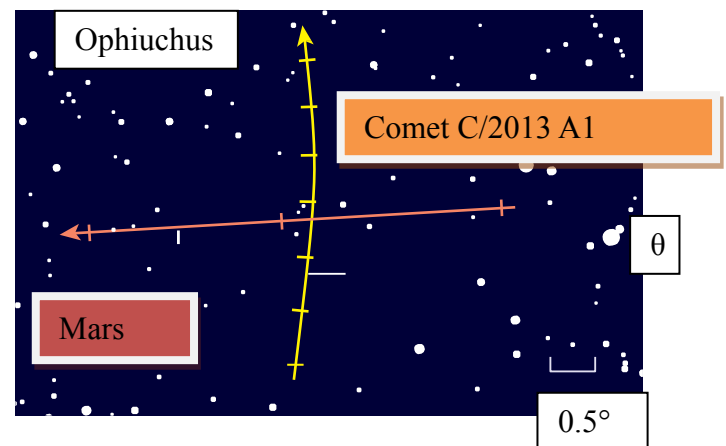
Saturn- SW Sky sets about 21:42 EDT, magnitude +0.6 size 16 arc seconds.

Uranus- Rises about 22:00 EDT, magnitude +5.9, size 3.4 arc seconds.

Neptune Rises about 18:24 EDT, magnitude +7.9, size 2.4 arc seconds.

Red and White against the Blue – A Comet at Mars!

This September and mid-October a comet and Mars have a close encounter! The comet should be an 8th magnitude object from Earth in late September and October but will blaze in Mars' sky when it passes within 83,000 miles of that planet October 19. Comet Siding Spring C/2013A1 should glow near 8th magnitude as it climbs into Earth's evening sky in October. But observers will have their eyes focused on 1st-magnitude Mars to see the comet skim above the planet's surface. From North America on the 19th, the comet appears about half the Full Moon's diameter from the planet. Although the scene from Earth should be nice, the view from our robotic emissaries on and above the Martian surface should be truly memorable. The comet will be 1/3 the distance from the Earth to our Moon in comparison.



The tick marks begin on Oct 16 and are daily for the comet (gold), Mars in red starts on the 16th with 3 day steps. The intersection is October 19th. Article and cart is from Astronomy Magazine's Sky Guide 2014 page 10.

Comet Siding Spring (C/2013 A1) has a date with Mars on October 19. The two objects come within 83,000 miles of each other that morning, when they will appear together in a single telescopic field of view. *Astronomy*. Roen Kelly



September 2014

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1	2 First Quarter	3	4	5	6 Ft Howard Defenders Day Re-enactment
7 Ft Howard Defenders Day Re-enactment	8 Full Moon	9	10	11	12	13 N3P Special Event
14 N3P Special Event	15 Last Quarter	16	17	18	19	20 SkyPark Wings & Wheels
21	22 Fall Equinox	23	24 New Moon	25	26	27 1 pm VE Testing White Marsh Library
28	29	30				