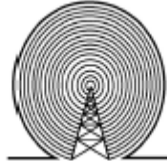


# The Ham Arundel News



Providing Fellowship and Community Service through Amateur Radio Since 1951

February 2013

35<sup>rd</sup> Year of Publication

## Prez Sez



The temperature is down, the snow and sleet, are falling. It's time to snuggle up to a nice warm radio, and talk to other hams in far away, warmer or colder places. That's the joy of amateur radio it allows us to escape to the airways and meet with old friends or make new friends.

Speaking of meeting with friends the first "Radio Breakfast", of the year was

held at the Old Country Buffet in Annapolis on Saturday January 26th. If my count was correct there were 23 attendees, including hams and their YLs, or OMs. The breakfast increases in popularity each time it is held. The food was good (love the cinnamon buns), the conversations ranged from antique radios, to DXing, to antennas, to the weather, to swans. All had a great time and vowed to return for the next breakfast. Watch the web site, for the date of the next "Breakfast", a great way to spend a Saturday morning.

Les Silva, KH6CUJ, has volunteered to become the Public Service Coordinator. This very important activity goes to the heart of amateur radio, and our commitment to serve the local community. We have become a very popular form of communication for the various activities in the county including road races to walks for the animals to puppy plunges, etc. Two dates this year have competing activities that will spread our resources very thin. There are many members who participate, but we can always use more, particularly this year. Don't worry if you have never done this before, you will be placed with an experienced operator who will mentor you. Please contact LES at ([kh6cuj@aol.com](mailto:kh6cuj@aol.com)) and offer your help.

We are still waiting for BG&E to correct the power pole problems so that Verizon can finish installing the new FIOS phone system to the clubhouse. The system will be placed in the repeater room and will have the proper grounding that should eliminate unwanted electrical surges that, might damage radio equipment.

In late January, the 147.105 repeater shutdown with a problem. Thanks, to John Williams K8JW, who is truly "Johnny on the spot", a backup repeater was quickly installed and we were back on the air in a short period of

time. THANK YOU! John.

The meetings coming up in February will be good ones. The business meeting on February 7 will include a short movie on "Field Day" by Bob Rose AA3RR (these are always winners). The movie will be followed by a short report on the first Field Day committee meeting, by Brenda Diamond-Rose KB3ATI. Then an interesting program on Software Defined Radio on the Cheap will be presented by Chuck Tanner K3ACT.

The February 21<sup>st</sup> program meeting will feature a Flex Radio Demonstration by Rick Creager KK4GV. If you have a program that you feel might be of interest to the club contact Chuck Tanner K3ACT.

If you are interested in contest operation, and a bit of fellowship think about February 9, 2013. Starting after testing at about 1500 hours a group of members will gather to operate in the Louisiana QSO Party, mostly for fun. This will be chance to learn about contesting, and for Technicians, to operate in the HF mode. The activity is being chaired by Steve Kelly K3BAY. See the web Site for more information.

Don't forget, if you have friends that have expressed an interest in Amateur Radio, we have a Technician Class, beginning March 2, 2013.

The Website has all the details with links to sign up.

Jim Goldsberry KB3NQY

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## 2012 Marks All-Time High for Amateur Radio Licenses

As 2012 came to a close, ARRL VEC Manager Maria Somma, AB1FM, had a good reason to cheer: The number of radio amateurs in the US reached an all-time high of almost 710,000. "2012 was definitely a banner year for the number of Amateur Radio operators here in the US," she said. "It is amazing to see these new numbers and to know that Amateur Radio is experiencing such a healthy trend."

In looking at new and upgraded licenses, as well as licensees per ARRL Division (see the charts below), Somma also crunched the numbers looking for growth within each license class -- and all of Amateur Radio -- over the last 40 years. "This is an all-time high for Technician, General and Amateur Extra class licensees," she said. "When looking at the three current license classes, the number of Technicians, Generals and Amateur Extras peaked in December at 345,369, 163,370 and 130,736, respectively."

Somma explained that the total number of US amateurs







## Anne Arundel Radio Club History – Pt 2

### Anne Arundel History 1971 - 1980

In the Fall of 1976 Russ Lockett/WA3IBE advised the Club of the possibility of getting a clubhouse on the old NIKE site in Davidsonville. The DFRC (Davidsonville Family Recreation Center) had taken control of the property. A committee of Club members was immediately appointed to investigate this opportunity. They looked over the property and chose the present clubhouse building, requesting that the radar platform be left standing.

A verbal agreement was made with the DFRC to occupy the premises pending a written agreement. The building was in a sorry state. There was no heat, no water, no electricity. However, this did not deter the AARC. The members wanted more than anything to have their own clubhouse once again.

When Bob Miller/W3AZV became president, he immediately moved the AARC meeting place to Davidsonville. Since the new clubhouse was not yet a fit place for habitation, the Club met temporarily in the Boy Scout's room down the hill. Club members rallied around the new president. Work parties were scheduled every Saturday, and sometimes on Sundays, to clean up the place and make it liveable.

One of the first things was to get power. It was determined that power was available at the power transformers. A small room was constructed at the end of the storage building for the power panel, and 220 and 110 volts were supplied. Cables were obtained by salvaging the underground cable left by the government. A heavy-duty cable was run from the power panel to the circuit breaker box in the kitchen, and the lights were installed. The surplus cable was stored in the locked clubhouse, but someone broke into the place and stole it, apparently for the copper content.

In December 1976 a quick trip was made to Lynchburg, VA to pick up a used repeater from WB4MOV. The repeater was taken to the home of Harry/N3DE, where he added the necessary accessories to make it workable on our new frequency of 147.105 Mhz, which had been assigned to the Club by TARC (The Mid-Atlantic Repeater Council). The frequency of 146.430 Mhz was retained for simplex use when needed.

The Club obtained a Ringo antenna and mounted it atop the 70-foot pole for the repeater. A small room was built at one end of the kitchen near the circuit-breaker boxes for the repeater. Harry tested the repeater from his home during December of 1977, and on December 26th he moved it to the clubhouse and put it on the air. This was like a Christmas gift to the Club members.

The repeater had a coverage of about 35 miles even with a less-than-adequate antenna only 70 feet up in the air. It was decided that the repeater needed a higher and better antenna.

In June 1977 the first edition of the Ham Arundel News came out with Derek/AA3A as the editor. Some of the highlights of this issue: -the attendance at the Linthicum parade with the PA system - work parties at the clubhouse - Field Day preparations - two new members. The newsletter proved to be a huge success. Twenty-eight persons joined the Club in 1977, bringing the total membership to 48. That year 20 members upgraded their licenses.

Early in November of 1978, Bill Miller/WB3JWX learned (and reported it to the Club) of a tower on Jumpers Hole Road which was free to anyone who would take it down and haul it away. The tower was the property of the Chesapeake Distributing Co., distributors of Millers Beer. A group of members was hastily assembled to take down the tower. Russ/WA3IBE transported it to the clubhouse. On the last Saturday in November a crew, headed by Derek/AA3A gave the tower a shiny new coat of aluminum paint.

Bill Miller/WB3JWX drove to Lexington Park, MD and picked up 2000 feet of guy wire for the tower. A crew, headed by Russ/WA3IBE installed concrete anchors at three points for the guy wires. Things were moving rapidly. The Club wanted the tower and antenna up before cold weather set in. On Saturday December 3, 1978, Bill/WB3JWX and group put up 60 feet of the tower, with guy wires every 30 feet.

The following Saturday was a cold, breezy, sunny day with a temperature of 30 degrees. The Club assembled a large crew at the clubhouse to complete the other 60 feet of the tower. Then the antenna was installed. Incidentally, the previous Saturday Bill/K3CN spotted in the clubhouse the old Station Master Antenna which had been left behind by the government. It was taken outside and tested by hooking it into a TR-7400 mobile rig. The results were startling. Stations as far away as Silver Spring and Rockville were heard and worked on simplex. Frederick repeaters were keyed up. The antenna worked so well that it was decided by the technical committee to mount it atop the tower instead of the Ringo.

At 3:30 PM on Saturday December 10th the Station Master Antenna was placed atop the tower and the hard-line coax was connected. A long section of RG-213 was borrowed from Jim/W3SCD and run from the top of the platform across to the 70-foot pole and connected to the repeater in the kitchen. Better signal reports came in immediately, along with greater coverage.

On December 23, 1978, the repeater house took shape up on the platform at the base of the tower. Cement blocks were hauled up to the radar platform by pulley and Bill Miller/WB3JWX built the little house.

By January 1979 it was completed, and the repeater was moved from the kitchen and installed in its new home.

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Members listed in this article. Where are they now?

<b>WA3IBE</b>	<b>Russ Lockett</b>	<b>Active</b>
<b>W3AZV</b>	<b>Bob Miller</b>	<b>No Record</b>
<b>WB4MOV</b>	<b>Henry Holcomb</b>	<b>Active</b>
<b>N3DE</b>	<b>Harry Suit</b>	<b>Active</b>
<b>AA3A</b>	<b>Derek Scorer</b>	<b>No Record</b>
<b>WB3JWX</b>	<b>Bill Miller</b>	<b>Active</b>
<b>K3CN</b>	<b>(Bill) Craig G. Nilsen</b>	<b>Call sign reassigned</b>
<b>W3SCD</b>	<b>James Jermain</b>	<b>Active</b>

# Anne Arundel Radio Club

Original Drawing of the Club Logo



Designed by Dick Jessup, N3JN

and Adopted by the Club September 1977



## How Do You Choose an Antenna Analyzer?

By Dan Romanchik, KB6NU

A reader recently e-mailed me:

"In the past you told me you started with the Autek RF-1, and later moved to the Palstar ZM-30. I am finally getting around to thinking about purchasing an antenna analyzer, but I am stumped by the choices. In order of increasing purchase price this is what I've turned up:

- \* Autek RF-1 - \$139.95
- \* Autek RF-5 - \$229.95
- \* Rig Expert AA-54 - \$340.00
- \* Palstar ZM-30 \$399.99
- \* W4RT Electronics MiniVNA \$399.99
- \* Rig Expert AA-230PRO \$690.00
- \* Timewave Technology TZ-900S \$899.99

"How does one decide? Where does one go to find out the differences? Other than asking a fellow ham, how does one find out which one is the best antenna analyzer without paying an arm and a leg (unless the feature(s) so purchased are deemed worth the cost)?

"Thanks! 73"

When I replied, I noted that he had actually missed several other good choices:

- \* Autek VA1 - \$199.
- \* MFJ 259B - \$240.
- \* YouKits FG-01 - \$250.
- \* Comet CAA500 - \$450.

The Autek VA1 is actually the antenna analyzer that I first purchased. The MFJ 259B is arguably the most popular antenna analyzer on the market. MFJ has several other models with different feature sets. The YouKits FG-01 is a very cute, little analyzer with a small graphical display. It is made in China and sold in the U.S. by TenTec.

So, how do you choose just one from this list? Well, I think the first thing that you have to ask yourself is how you're going to use the analyzer. If all you're going to do is to check the SWR of your HF dipoles, then buy the Autek RF-1. It's the least expensive unit, is reasonably accurate, and is small and lightweight, making it easy to use outside where your antennas are located.

If you want to do some more serious frequency analysis, then you should be looking at the W4RT miniVNA or, if you have more cash, the Timewave TZ-900s. These instruments can help you do a lot more in-depth analysis of your antenna system. The software for the miniVNA, for example, will easily plot the SWR of a multi-band vertical antenna from 3 - 33 MHz.

Some antenna analyzers do more than just SWR. For example, what sold me first on the Autek VA1 and then on the Palstar was that they also measured reactance. So, you can use the antenna analyzer as an LC meter as well. Palstar also says that you can use the ZM-3 as a low-level signal source. While I have used my Palstar to measure inductance and capacitance, I have yet to use it as a signal source.

Next, you need to consider what bands you'll be using it on. Many antenna analyzers only cover the HF bands. That's a bummer if you like operating 6m, or like to experiment with VHF/UHF antennas. A friend of mine

bought the Palstar antenna analyzer after talking to the company at Dayton. At the time, they said that they were planning to come out with a model that covered 6m, as well as the HF bands.

Unfortunately, they never did come out with a 6m version, and he was sorely disappointed. He ended up buying a miniVNA instead. The miniVNA can be used up to 170 MHz right out of the box, and up to 1.5 GHz with an optional extender.

Asking your fellow hams about the antenna analyzers they have is actually a good way to figure out what's best for you. If you ask nicely, they might even let you borrow their analyzers or come over and show you how it works on your antennas.

Reading the reviews on eHam is also a good way to gather information before making a purchase like this. You certainly have to take the reviews there with a grain of salt, but if several reviewers mention a particularly good or particularly bad feature of a product, then it's certainly something worth taking a hard look at.

If you're new to the hobby, starting out small and working your way up might be a good strategy. You could buy one of the less expensive models and get used to how they work, then sell it and make the leap to a more sophisticated unit. The way things are going, you should be able to sell your first antenna analyzer for at least 80% of what you paid for it.

The March 2012 QST contains an in-depth review of four analyzers (available online to ARRL members), including the Comet CAA-500, MFJ-266, RigExpert AA-54, and the Youkits FG-01. Each analyzer reviewed had various pluses and minuses. Even if the unit you are considering was not reviewed, the article provides a guide to the kinds of questions you should be asking as you go through the selection process.

When he's not analyzing antennas, Dan, KB6NU blogs about amateur radio at KB6NU.Com, writes and publishes the "No-Nonsense" series of amateur radio license study guides, and just has fun with amateur radio. You can reach him by e-mail at [cwgeek@kb6nu.com](mailto:cwgeek@kb6nu.com), @kb6nu on Twitter, or on 40m CW many evenings.

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## AREA HAMFESTS for February

### Winterfest

Start Date: 02/24/2013

End Date: 02/24/2013

Location: Ernst Community Cultural Center at Northern Virginia

Community College, Annandale Campus

8333 Little River Turnpike

Annandale, VA 22003

Website: <http://www.viennawireless.org/winterfest.php>

Sponsor: Vienna Wireless Society

Type: ARRL Hamfest

Talk-In: 146.91 (no PL tone)

Public Contact: Jack Welch, AI4SV

3925 Wilcoxson Drive Fairfax, VA 22031

Phone: 314-266-8426

Email: [dhakajack@gmail.com](mailto:dhakajack@gmail.com)

# REPEATER FREQUENCIES

Davidsonville	Millersville	Glen Burnie	Annapolis
147.105+		147.075+	
223.880-	224.560-		
444.400+			442.300+

**PL: 107.2 for all repeaters**

The 147.105 and 147.075 repeaters are frequently linked. Please leave an extra second after the courtesy beep to allow the link to reset as well.

*Visitors are welcome to all meetings and nets.*

*Meetings are held in the Clubhouse at the  
Davidsonville Family Recreation Center,  
Queen Anne Bridge and Wayson Roads off  
MD Route 214 near Davidsonville, MD.*

*For en-route directions, make initial contact on the 147.105 repeater.*

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## Wednesday Night Talk Net -- All are welcome

8PM, On the AARC Repeater 147.105

### Other Amateur Radio nets

Name	Frequency	Day	Time
Morning Commuter Net	147.105+ PL 107.2	Weekdays	0600
AA County ARES Net	146.805-Mhz PL 107.2	Sunday	2000
Baltimore Traffic Net	146.670-Mhz	Daily	1830
Maryland Emergency Phone Net	3.820Mhz	Daily	1800
MD-DC-DE Traffic Net	3.557Mhz	Daily	1900 and 2200
Maryland Mobileers Net	146.805 PL107.2	Monday	1930
Maryland Slow Net	3.563 MHz	Daily	1930
REACT Net	442.300+Mhz PL107.2	1st Sunday	1930

# Field Day Notes of January 12, 2013

de AA3RR

The Field Day Planning Committee held its first meeting on 12 January at the clubhouse. The following are the salient points from that meeting:

- We will participate as a 10A or possibly as an 11A.
- Pending any unexpected changes to the Field Day rules, we will operate on MF, HF and VHF using CW, Phone and Digital modes.
- We will operate 1 HF digital station, 3 CW HF stations, 5 HF Phone stations, 1 MF Phone station, 1 VHF station (6m) and possibly 1 VHF station (2m).
- As always, our primary goal is to have a safe and fun Field Day event. In addition to the preceding "boiler plate" goal there are other goals such as numbers of contacts, Field Day Bonus Points, etc. that we will develop in the coming months.
- We may need to ask club members to provide transceivers and laptops for the duration of the operating phase of Field Day.
- We also discussed having a theme for Field Day. The consensus is that a theme might inject some additional interest in our Field Day activity. So the theme for Field Day 2013 will be "A Hawaiian Field Day in Davidsonville".
- We are also offer club members the opportunity to "practice" for Field Day by operating in four QSO parties starting in February and ending in early May. We'll also schedule some training on assembling, raising and taking down antenna masts; assembly of shelters; and use of the logging software.
- We are going to ask the same Disaster Readiness group that provided dinner on Saturday last year, to prepare two meals for us this year (Lunch and Dinner on Saturday). The menus are in development. If you provide a total of 4 hours of "sweat equity" (help set up, Operate, Log, provide support, or help with take down) during the weekend we'll feed you.
- In addition to the meals we will have evening snacks on Saturday and we will provide water and Gatorade all three days. We will provide sodas but only during the meals. As in the past we will place a cooler with ice, water and Gatorade in each shelter. We will need to make several purchases of ice during the three days.
- We will use one or two generators to provide power for the radio stations, laptops, fans, and lights. The generators will require fuel of course.
- Our most pressing challenge for Field Day is the level of participation by the members of the club. Over the past three years the number of Field Day participants has declined from 135 in 2009 to 38 last year.
- We plan to implement a "media blitz" that will include local advertising, club meetings, the club newsletter, and the AARC website and Field Day blog to promote Field Day.

- Field Day flyers are being distributed during every license exam session from February through June. We will also distribute Field Day posters at local businesses in the Davidsonville area.
- In early February we will mail invitations to various VIPs to attend our Field Day event.
- Field Day "commercials" will be played during the Club's Program meetings and at some "business" meetings. I had planned to present a "commercial" at Thursday's meeting but while at the clubhouse I realized that I had brought the wrong thumb drive. My drive with the movie was connected to my computer. So in February there will be two commercials.

The next meeting will occur in late February or in March following the exam session on the 9<sup>th</sup>.

Don't forget the operating event at the clubhouse on Saturday, 9 Feb from 3pm-10pm. It's the Louisiana QSO Party.

If you have questions send an e-mail to [fieldday@w3vpr.org](mailto:fieldday@w3vpr.org).

**(Editor's Note: Field Day is always the fourth full weekend in June. June 2013 has five weekends in it, so make sure you have the correct date! Field Day 2013 will be the weekend of June 22-23.)**

AA

## NASA ANNOUNCES STUDENT INTERNSHIPS FOR SUMMER

AMSAT News Service Bulletin 013.01  
From AMSAT HQ SILVER SPRING, MD.

### College Level Internships

NASA says they are accepting applications for college level summer internship positions among several NASA field centers. "But don't wait until the deadline," advises NASA mentor and fellow AMSAT member, Pat Kilroy, N8PK. "The opportunities to work on a CubeSat team, for example, are exciting but pretty competitive."

It is thought that students who know the "AMSAT way" and who have an Amateur Radio license and some hands on experience have a distinct advantage in the midst of such competition.

"That worked for me," said Pat.

Students can view opportunities and apply for them in one place. To start, the prospective student should go to:

<https://intern.nasa.gov/>

then click the Student Opportunities tab then select Internships, which will bring you to the OSS1:NIFS page describing the overall internship program.

Using the Search Opportunities tab from there, scroll down to the bottom for the "Enter keywords" box and enter "cubesat" without the quotes to view the variety of different opportunities in this field.





## W1AW 2013 Winter Operating Schedule: Notes:

### Morning Schedule:

	Time	Mode	Days
1400 UTC	(9 AM EST)	CWs	Wed, Fri
1400 UTC	(9 AM EST)	CWf	Tue, Thu

### Daily Visitor Operating Hours:

1500 UTC to 1700 UTC	- (10 AM to 12 PM EST)
1800 UTC to 2045 UTC	- (1 PM to 3:45 PM EST)

**(Station closed 1700 to 1800 UTC  
(12 PM to 1 PM EST))**

### Afternoon/Evening Schedule:

UTC	Time	Mode	Days
2100	(4 PM EST)	CWf	Mon, Wed, Fri
2100 "	"	CWs	Tue, Thu
2200 "	(5 PM EST)	CWb	Daily
2300 "	(6 PM EST)	DIGITAL	Daily
0000 "	(7 PM EST)	CWs	Mon, Wed, Fri
0000 "	"	CWf	Tue, Thu
0100 "	(8 PM EST)	CWb	Daily
0200 "	(9 PM EST)	DIGITAL	Daily
0245 "	(9:45 PM EST)	VOICE	Daily
0300 "	(10 PM EST)	CWf	Mon, Wed, Fri
0300 "	"	CWs	Tue, Thu
0400 "	(11 PM EST)	CWb	Daily

### Frequencies (MHz)

<b>CW:</b>	1.8025	3.5815	7.0475	14.0475
<b>CW:</b>	18.0975	21.0675	28.0675	147.555
<b>DIGITAL:</b>		3.5975	7.0950	14.0950
<b>DIGITAL:</b>	18.1025	21.0950	28.0950	147.555
<b>VOICE:</b>	1.8550	3.9900	7.2900	14.2900
<b>VOICE:</b>	18.1600	21.3900	28.5900	147.555

CWs = Morse Code practice (slow) = 5, 7.5, 10, 13 and 15 WPM

CWf = Morse Code practice (fast) = 35, 30, 25, 20, 15, 13 and 10 WPM

CWb = Morse Code Bulletins = 18 WPM

CW frequencies include code practices, Qualifying Runs and CW bulletins.

DIGITAL = BAUDOT (45.45 baud), BPSK31 and MFSK16 in a revolving schedule.

Code practice texts are from QST, and the source of each practice is given at the beginning of each practice and at the beginning of alternate speeds.

On Tuesdays and Fridays at 2330 UTC (6:30 PM EST), Keplerian Elements for active amateur satellites are sent on the regular digital frequencies.

A DX bulletin replaces or is added to the regular bulletins between 0100 UTC (8 PM EST) Thursdays and 0100 UTC (8 PM EST) Fridays.

Audio from W1AW's CW code practices and CW/digital bulletins is available using EchoLink via the W1AW Conference Server named "W1AWBDCT." The 9:45 PM ET phone bulletin is currently unavailable via W1AWBDCT. The audio is sent in real-time and runs concurrently with W1AW's regular transmission schedule.

All users who connect to the conference server are muted. Please note that any questions or comments about this server should not be sent via the "Text" window in EchoLink. Please direct any questions or comments to [w1aw@arrl.org](mailto:w1aw@arrl.org).

In a communications emergency, monitor W1AW for special bulletins as follows: Voice on the hour, Digital at 15 minutes past the hour, and CW on the half hour.

All licensed amateurs may operate the station from 1500 UTC to 1700 UTC (10 AM to 12 PM EST), and then from 1800 UTC to 2045 UTC (1 PM to 3:45 PM EST) Monday through Friday. Be sure to bring your current FCC amateur radio license or a photocopy.

The W1AW Operating Schedule may also be found on page 90 in the January 2013 issue of QST or on the web at, <http://www.arrl.org/w1aw-operating-schedule>

NNNN  
/EX

Source: W1AW Bulletin via the ARRL

# Anne Arundel Radio Club, Inc.

Anne Arundel Radio Club, Inc.  
P.O. Box 308  
Davidsonville, MD 21035

First Class Mail

