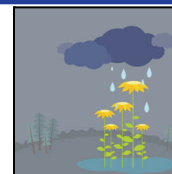




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## President's Message



Dear SARA Members,

Following are highlights of progress within SARA:

- The current SARA membership is 58.
- Thanks to all participating in weekly 50/50 drawings that added a small, fun social element to Saturday morning breakfasts that additionally helps support SARA's operational funds.
- The 2 meter D-Star frequency has been changed to the new frequency pair (145.320MHz)! Future usage of 147.375 MHz to be announced in the near future.
- Progress made on tower access (Stafford County's Glendie tower site), increas-

ing repeater options and height advantage above the North Stafford site. On 03/29/09, the county temporarily cut service to their hard lines to install hard line to be used by the SARA repeater.

- Congratulations to SARA Award recipients Luis - W9LA, Rich - N0RMC, Dennis - K14GZY, and Andy - KJ4CCU who distinguished themselves in making significant contributions to SARA this past year (see Awards Section for details).
- It was great to see SARA members at the Frostfest in Richmond on February 7th, 2009. Several photos are included in this issue.

- Although previously serving a purpose, the Yahoo Group (<http://groups.yahoo.com/group/StaffordARA/>) has been removed in effort to simplify SARA communications centered around the new website.
- Members are encouraged to assist in periodic work parties when announced. This will help maintain our allocated facilities & equipment. Many hands make for light work!

Enjoy the Spring weather and the opportunities to work outside on your antenna systems and radio equipment!

Thanks & 73

## Treasurer's Report



The following is SARA's account balance for February 2009 (March statement not available during preparation of this newsletter).

February's beginning balance was \$4,940.38.

Bills paid included \$260.00 for quarterly Verizon service. (January - March, plus leftover from activation of \$25.79)

Amounts received totaled \$152.50 (\$10.00 from sale of connectors at Frostfest, \$108.50 from 50/50 drawings, \$34.00 in donations).

Expenditures authorized but not yet executed included \$1,200.00 for D-Star cans (funded by donations and up to \$500.00 from existing assets pending receipt of the invoice from the Trustee).

Net balance is \$3,632.58.

Prepared by:

Andy Miles (KJ4CCU),

Treasurer

# Amateur Radio Testing

As a reminder, the ARRL test fee is now \$15 as of January 2009.

Exams are offered monthly on the 2<sup>nd</sup> Sunday from 1300-1500 hours at the Stafford Public Safety Center near the County Courthouse. Please visit <http://www.qsl.net/semcomm/products.htm> and its 3 other links for more detailed information.

Kudos to Jack KB4XF, Emmett K3EP, Barb K6AGC, and Lew W3GHU for running the March exam session.

Prepared by:  
Curt Bartholomew, N3GQ,  
VE Session Manager



**New Testing  
Location &  
Schedule**

**Consider  
becoming a  
Volunteer  
Examiner in 2009!**

**Visit: [http://  
www.arrl.org/  
arrlvec/become-  
a-ve.html](http://www.arrl.org/arrlvec/become-a-ve.html)**

## Thank You Bob (AA4PB)!



**Bob (AA4PB) is presented a  
Certificate of Appreciation by  
Bart (N3GQ) and Emmett (K3EP)**

On Saturday March 21, 2009, long-time SARA member Bob Lewis (AA4PB) made a very generous donation to SARA of an SCS PTS-II equipped with Pactor I, Pactor II, and internal 1200 baud Packet modem to SARA, also providing the manual and ACC(I) connector.

A Certificate of Appreciation was presented to Bob during Saturday morning breakfast by EC/RO Bart (N3GQ) and Trustee Emmett (K3EP).

The PTS-II will be utilized at the Stafford Emergency Operations Center Radio Room

where it will be connected to the Icom 756 and very useful in supporting emergency communications.

The PTS-II is ready to go with Pactor III once the license is purchased.

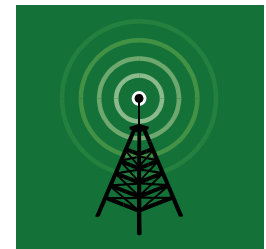
***Thank you Bob for the generous donation!***

## Reporting Repeater Interference

In late February and early March 2009, malicious interference occurred on the 145.270 MHz repeater during member QSOs and during a SARA Thursday evening net. Emmett - K3EP (Trustee) sent a proactive, informative email to members with recommendations on how to best handle and report observations of malicious interference. The malicious interference consisted of someone repeatedly keying up during another's conversation, interfering with the conversation or repeatedly keying up "kerchunking" the repeater without proper identification using a call sign. You are

strongly encouraged to report observations and reports to Emmett in order that recurrence can be resolved.

- Reporting repeater misuse/abuse is as simple as logging onto the SARA website, navigate to the "Repeater" web page, open and complete the "Report Repeater Misuse" form and click submit.



**Getting the word out!**

# SARA Annual Awards

## “Ham of the Year” - Rich (N0RMC)

For his tireless efforts while conducting meetings, installing complex digital equipment, maximizing user configurations, and coordinating with the Northern Virginia D-Star Association, for the establishment and operation of SARA’s state-of-the-art digital radio repeater system, while serving as a member of the Technical Committee for the Stafford Area Radio Association.



**Rich (N0RMC) (on right)**  
“Ham of the Year”

## “Unsung Hero of the Year”

### Dennis (KI4GZY)

(presented March 7, 2009 due to out of town travel).

For his countless hours of back-breaking work installing and repairing antenna hard-line coaxial cables and his expert assistance to the SARA Technical Committee while maintaining, testing, and tweaking the several SARA radio repeater systems, often in biting cold or blistering hot weather.



**Dennis (KI4GZY) (on right)**  
“Unsung Hero of the Year”

**Each year SARA recognizes members for distinguished service during the year and for a job well done!**

**On February 21, 2009, annual SARA awards were presented to the these fine members during a ceremony at Saturday morning breakfast by Harry (KI4JVE) and Bart (N3GQ).**

## “Elmer of the Year” - Luis (W9LAO)

For his in-depth teaching of life-saving CPR and AED skills at the professional Basic Life Support certification course that he set-up and supervised, and his thoughtful mentoring of SARA members.



**Luis (W9LAO) (on right)**  
“Elmer of the Year”

## “Volunteer Emergency Communicator of the Year” - Andy (KJ4CCU)

In recognition of his outstanding service to the Stafford County Volunteer Emergency Communications Team. His personal contributions and continuous dedication to ensuring station, equipment, and team readiness reflect great credit upon him.

*(Special thanks to Bart for creating & mounting the award certificates and Sig-KG4UCM for taking the photographs)*



**Andy (KJ4CCU) (on left)**  
“Volunteer Emergency Communicator of the Year”

# Frostfest Photos (Photographs courtesy of Sig - KG4UCM)



## Upcoming Events

Dates to Remember

- May 3, 2009: Antietam Radio Association Hamfest, Washington County Agricultural Center, Boonsboro, MD ([www.w3cwc.org](http://www.w3cwc.org)).
- May 24, 2009 Maryland FM Association Memorial Day Hamfest, Howard County Fairgrounds ([www.marylandfm.org](http://www.marylandfm.org))
- June 14, 2009: Ole Virginia Hams Amateur Radio Club Hamfest, Prince William County Fairgrounds, Manassas, VA ([www.w4ovh.net](http://www.w4ovh.net)).
- July 1, 2009: SARA Membership Renewal
- June 28-29, 2009: ARRL Field Day.
- July 19, 2009: Baltimore Radio Amateur Radio Television Society Hamfest at Howard County Fairgrounds ([www.bratsatv.org](http://www.bratsatv.org))
- August 2, 2009: Shenandoah County Amateur Radio Club 59th Annual Berryville Hamfest, Clark County Ruritan Fairgrounds, Berryville, VA ([www.svarc.us/hamfest](http://www.svarc.us/hamfest)).



# D-STAR User Account/Registration Policy

Through SARA affiliation with the National Capitol Region D-Star Association, it was learned there is a trend of non-member hams requesting D-Star registration through various radio associations possessing D-Star capabilities (in some cases states away, that could connect and use the repeater frequencies such as through Dongle).

In order to mitigate risk & prevent potential misuse or abuse of SARA's D-Star repeater system as well as membership process, the SARA Board proactively adopted the following policy as discussed at the March 6, 2009 Board meeting.

*1. Current SARA members in good standing are eligible to submit request for an active user account for D-Star registration through SARA.*

*2. Those not holding SARA membership and desiring D-Star registration should:*

- a) *Hold residence in the local area (within the general coverage area of the SARA repeaters) for a minimum duration of at least 6 months each year;*
- b) *Hold a current, valid Amateur Radio License from the Federal Communications Commission;*
- c) *Submit a membership application and dues payment to SARA;*
- d) *Upon approval of SARA membership application, may submit a request for issuance of a D-Star User Account.*

*3. Those residing outside the general coverage area of the SARA repeater are encouraged to affiliate with an amateur radio association having D-Star capabilities*

*closest to their locale.*

*The policy is hereby:*

1. *Communicated to the membership via newsletter;*
2. *To be posted on the SARA web site under the D-Star section, and*
3. *Retained by the SARA Secretary for archived records."*

*Note: This policy does not hinder any registered D-Star user from using SARA D-Star repeaters while visiting or passing through the area similar to other open repeater protocols.*

**A New SARA Policy**



# Emergency Communications

## The Public Safety Center's Emergency Communications Radio Room is operational as of February!

- Several SARA and EmComm team members devoted many hours to getting the Radio Room moved from the Training & Logistics Center and then set up in the new Radio Room.
- A few members spent hundreds of dollars of personal money to get the stations on the air.
- We now have 2 VHF stations and one HF station operational there.
- When the Radio Room is up to par and we receive County approval, we will advertise an Open House.
- If you know of a table that can be used as a conference table, seating at

least 6 folks, we would be most appreciative!

### New Trial EmComm Training Net (145.270MHZ)

- The first 2 sessions of the new 15-minute EmComm training net on Tuesday nights at 8:00 PM have been relatively successful.
- The training net covers content in the Level I of the ARRL's Amateur Radio Emergency Communications Course. Each net is scripted separately.
- Upon completion of all the Learning Units, an ARRL exam will be offered (\$15) for certification at the ARECC Level I, saving participants the \$45 course fee. A text book can also be purchased at the ARRL web page.

- Please let us know if this time frame is a good time for you and if you would prefer additional or different content.

### Classroom Training:

- Skywarn I & II Classes are coming up in July or August. When Emmett K3EP called the Sterling NWS office, the NWS indicated that this was the earliest time available. We will announce the class dates and times when they are scheduled.

Prepared by:

Curt Bartholemew (N3GQ)



# PSK31 Frequencies

If you work HF or VHF PSK31, the following PSK31 frequency chart can be found at website:  
<http://k0swi.microInk.com/LISTS/PSK31/PSK31%20FREQUENCIES.htm> (courtesy of Butch - KF4HR)

*“A Handy  
 PSK31  
 Frequency  
 Reference  
 Chart”*

PSK31 HF Frequencies		PSK31 VHF Frequencies	
Band	Frequency	Band	Frequency
160 meters	1.838 MHz	6 meters	50.290 MHz
80 meters	3.580 MHz	2 meters	144.144 MHz
40 meters	7.035 MHz	1.25 meters	222.07 MHz
30 meters	10.140 MHz	70 centi-meters	432.2 MHz
20 meters	14.070 MHz	33 centi-meters	909 MHz
17 meters	18.100 MHz		
15 meters	21.080 MHz		
10 meters	28.120 MHz		

## EVE! Radio Amateurs bounce a signal off Venus



Radio Amateurs have achieved the very first reception of amateur signals bounced off the planet Venus, over 50 million km away - EVE (Earth-Venus-Earth). Peter Guelzow DB2OS, President of AMSAT-DL has provided a description of this landmark achievement. On March 25th, 2009 a team from the German space organization AMSAT-DL reached another milestone on its way to an own interplanetary probe towards planet Mars.

The ground station at the Bochum observatory transmitted radio signals to Venus. After travelling almost 100 million kilometers and a round trip delay of about 5 minutes, they were clearly received as echoes from the surface of Venus.

Receiving these planetary echoes is a first for Germany and Europe. In addition, this is the farthest distance crossed by radio amateurs, over 100 times further than echoes from the moon (EME reflections).

For receiving the EVE signals, an FFT analysis with an integration time of 5 minutes was used. After integrating for 2 minutes only, the reflected signals were clearly visible in the display. Despite the bad weather, signals from Venus could be detected from 1038UT until the planet reached the local horizon.

The 2.4 GHz high power amplifier used for this achievement is described in the current AMSAT-DL journal.

This represented a crucial test for a final key component of the planned P5-A Mars mission. By receiving echoes from Venus, the ground and command station for the Mars probe has been cleared for operational use and the AMSAT team is now gearing up for building the P5-A space probe.

For financing the actual construction and launch, AMSAT-DL is currently in negotiation with the DLR (Deutsches Zentrum für Luft- und Raumfahrt) amongst others, to obtain financial support for the remaining budget of 20 Mil Euros.

AMSAT-DL wants to show that low-cost interplanetary exploration is possible with its approach.

More information and the link to the official press release [in German]:

<http://www.amsat-dl.org/index.php?o...=166&Itemid=97>

The EVE experiment was repeated on Thursday, March 26th for several hours with good echoes from Venus. Morse code was used to transmit the well known “HI” signature known from the AMSAT OSCAR satellites.

(story courtesy of Butch—KF4HR)

# Editorial

## The Messages We Communicate ...



**Should we not police ourselves,  
we can lose the privilege.**

The Messages We Communicate ...

By: Harry A. Kern  
KI4JVE

One interesting aspect the amateur radio hobby brings with it is the variety of people, their varied interests, and personalities represented that hams "bring to the table" as we communicate information. Information extends beyond pressing the PTT button or key and talking. Included are our choices of conversation topics, words accompanying one's underlying or intended thoughts, as well as emotions that carry with it.

Whether an "old timer," a "new" ham, or somewhere in between, all can probably identify those select hams that distinguish their communication skills and demeanor in a professional manner, sensitive to the levity of what is said, how it is said, and to whom may be listening. They practice cultivating conversation, steering clear of questionable topics and questionable radio practice. These characteristics, in essence, describe... the "art of conversation."

Phone mode affords one the ability to hear and interpret real-time meaning of the sender's voice tone, volume, and inflections not necessarily present in code or digital text communication (even email messages). This statement is not critical of code or text as a method of communication where choice of words is probably of greater significance to achieve optimal understanding. It does emphasize the care we should exercise to best communicate our intended message to other parties.

The privilege of serving as SARA president has brought occasional reported "annoyances" to my attention observed by other hams concerning another's radio demeanor or conversation topic content on the air. These are not mentioned to offend or single anyone in particular. But, it is mentioned in spirit of best keeping amateur radio enjoyable for all sharing the repeaters, airwaves, and maintaining interests of others in the hobby... merely to be watchful for our individual behaviors when operating. Examples include the following to identify a few:

- Conversing when you have nothing to say or contribute.
- Choosing topics to discuss, best discussed off-line by telephone or in-person such as one's gripes about politics, religion, ineffectual topics such as "ear wax" (yes, you read correctly - ear wax), and other colorful topics.
- Holding down the PTT button when thoughts have not been composed (e.g. lengthy wait between words sometimes accompanied by sighing, coughing, laughing, background noise, etc.).
- Remaining attentive to the conversation at hand (not forgetting what we are talking about).
- Discussing gripes about ham testing "not being the way it used to be" (such as lack of a code test). Although well-earned under previous exam standards, how does the banter make a new ham feel after recently earning his/her first license under current mandates?
- New or less-informed hams conversing when it is obvious they have not carefully listened on-frequency, studied correct operating procedures, studied their radio instruction manual, and operating terminology.

Emmett (K3EP), SARA Trustee, authored an excellent guide entitled "SARA Repeater Etiquette" available for review on the SARA web site ([www.wv4va.org](http://www.wv4va.org)) that provides sound understanding of operating procedures.

The April 2009 issue of the ARRL QST magazine published an excellent article by Steve Sant Andrea, AG1YK, concerning the art of conversation entitled "Sky Chatting: Why just chat in a room when you can have the whole world?" (pg. 59).

Should we not police ourselves, we can lose the privilege. The above resources and "heeding our actions" will eliminate most, if not all, of the above concerns, thereby preserving our shared, rewarding hobby.

# Editorial

**It Seems To Us: "Most Effective Use" By David Sumner, K1ZZ, May 1, 2007**

(Re-printed as an informational reminder of how best to handle interference on the amateur bands in a responsible manner from ARRL website: <http://www.arrl.org/news/features/2007/05/01/1/>)

With every FCC amateur licensee now permitted to operate on at least four HF bands and thousands of new General and Amateur Extra Class licensees joining the multitude on all of the MF/HF bands, this is a good time to review how we live up to the principle set out in Section 97.101(b) of the FCC Rules: 'Each station licensee and each control operator must cooperate in selecting transmitting channels and in making the most effective use of the amateur service frequencies. No frequency will be assigned for the exclusive use of any station.'

First let's do some math. Worldwide there are more than 2 million radio amateurs who are licensed to operate on HF. In the United States and Canada alone the number is about 700,000. If we leave out Novices and Technicians on the basis that their HF privileges are very limited, the number is still about 350,000 -- and growing. The numbers are similar in Europe and along the Asian side of the Pacific Rim.

If a contact between two or more stations occupies just 2 kHz -- a bit less than the width of a typical SSB filter -- a 100-kHz chunk of spectrum can only support 50 QSOs. With the depressed state of solar activity that we have to live with for the next couple of years, the total bandwidth of the bands that are open at any given time is at best a few hundred kilohertz -- enough for a couple of hundred simultaneous QSOs, and not nearly enough to accommodate all the stations that are licensed to operate there.

Obviously, this is a simplistic illustration. CW, PSK31, RTTY and some other digital modes require quite a bit less than 2 kHz. The vagaries of propagation and the use of directional antennas often permit different pairs of stations to use the same frequency without interfering with one another. But any way you look at it, if a significant percentage of us decide to get on the air on a particular band at the same time, there isn't room for everyone to enjoy interference-free operation.

A common misconception is that the FCC rules require amateurs to avoid transmitting if doing so would cause any interference to ongoing communication. Minimizing interference by, for example, asking if a frequency is in use before calling CQ, is a courtesy we owe to one another and is certainly part of the "good amateur practice" required by Section 97.101(a). However, among the dozens of references to interference avoidance and mitigation contained in Part 97, the only specific references to avoiding interference to other amateurs that apply generally to amateur stations are the prohibitions against willful and malicious interference in 97.101(d) and against splatter and key-click interference in 97.307(b). Otherwise, as far as the FCC is concerned we're all equal, whether we have been meeting on the same frequency at the same time for the past 50 years or we were just licensed five minutes ago. Were that not the case, if we wanted to operate on a particular weekend we would have to rush home from work early on Friday to claim a frequency before they were all gone -- if the retirees would let us, that is. (You guys on the West Coast would be out of luck.)

Let's be clear about willful and malicious interference, which is pro-

hibited. Transmitting for the sole purpose of interfering with another station is an unpardonable sin. It is never acceptable, either to the FCC or to the amateur community. If you think otherwise, please get rid of your ham gear as soon as possible and find some other avocation. If you know it isn't right but you sometimes let your emotions get the better of you and do it anyway, seek counseling -- you probably need it to curb road rage and a few of life's other problems.



But let's also be clear about this: interference that occurs as a side effect of amateurs pursuing legitimate activities in crowded bands is simply a fact of life. Interference that is truly willful or malicious is rather rare. Sometimes interference results from operator error -- we all make mistakes. Sometimes it results from carelessness -- regrettable and avoidable, but not done out of malice. Sometimes it occurs because of differences in station performance -- if you run low power to a poor antenna or your receiver's selectivity isn't very good, it's no one's fault if you're "stepped on" from time to time. And sometimes interference just happens, as when propagation changes and a station that was in your skip zone is suddenly 20 over 9. It is unfair to your fellow amateurs to assume that every instance of interference you may encounter is a hostile act.

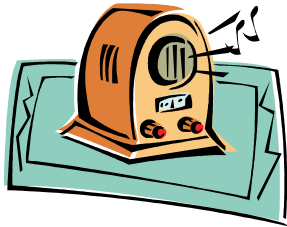
Yes, we all should do what we can to stay out of one another's way. The FCC says we must cooperate in making the most effective use of our limited frequency bands. We are expected to operate clean transmitters (no splatter or key clicks). We are expected to use the minimum transmitter power necessary to carry out the desired communications. But we are also expected to know that we cannot claim the exclusive right to use a frequency. Most of the unpleasantness that erupts from time to time on the most popular HF bands can be avoided if we're willing to be flexible in our frequency selection.

Our MF/HF bands are a limited, shared resource. For most of the 168 hours that make up a week, there is plenty of room for everyone who wants to operate. At peak times -- weekends and evenings, especially when the maximum usable frequency (MUF) is low -- it can be difficult to get a word in edgewise. If we accept this and adjust our expectations and operating patterns accordingly, and if we improve our stations and our operating skills, the amateur bands will continue to be -- as they have been for decades -- the most effectively used portions of the HF spectrum.

(Special thanks to Bart - N3GQ for submitting the timely editorial copy).

***“Transmitting for the sole purpose of interfering with another station is an unpardonable sin.”***

# Have An Article to Share?



- If you have an interesting article or pertinent information that you would like to share of benefit of SARA members about the amateur radio hobby, please send your draft to saraboardmembers.org.

- We will do our best to publish an informative newsletter on a quarterly basis to keep you current, interested in SARA, and the great hobby of amateur radio.

It is requested that articles be submitted in Microsoft Word and any accompanying photographs in electronic (.jpg) format when possible.

## Let Us Know

*Have an Issue?*

Please keep board members informed of any problems with SARA repeaters and equipment. We are making a concerted effort in staying on top of issues as well as keeping members informed of progress. The only way we may be informed about a problem is if you tell us (if not heard on the air).

Please contact any board member should you hear us on the air or email us at:

saraboardmembers@ww4va.org.

Board Members are:

Harry Kern (KI4JVE) - President

Sig Gates (KG4UCM) - Secretary

Andy Miles (KJ4CCU) - Treasurer

Curt Bartholomew (N3GQ) Member-at-Large

Emmett Price (K3EP) Trustee/Member-at-Large

## For Information . . .

- **If you have (or know of someone who is giving away) a conference sized table seating at least 6 people, we would like to know for use at the EOC!**
- Camden Bullock (N2CLB) requested announcement to SARA members that he recently changed his email address from Cybercamsemail@aol.com to Camden@n2clb.com.



**Wish to Share Information?**



### Stafford Area Radio Association

P.O. Box 6331  
Falmouth, VA 22403

Web Site: <http://www.wv4va.org>  
Email: [saraboardmembers@ww4va.org](mailto:saraboardmembers@ww4va.org)

Membership in the Stafford Area Radio Association (SARA) is open to all individuals interested in Amateur radio. We serve Stafford County, VA (population 124,000), the city of Fredericksburg, and surrounding counties. Our beautiful, historic county is located approximately 30 air miles South of Washington, D.C. We meet each Saturday for breakfast at approximately 7:00 a.m. at Perkins Restaurant, Rt. 17, Stafford, VA (exit 133 off I-95). Everyone interested in Amateur Radio is invited and welcome to attend. In Stafford County, the services of the ARES and RACES are combined into one Emergency Communications (EmComm) Team. Our association consists of approximately 60 members. We own and operate several repeaters in Stafford, VA with back-up power and have wide coverage including the counties of Stafford, Prince William, Spotsylvania, King George, and the City of Fredericksburg.

## SARA Repeaters

### WW4VA (Analog)

145.270 MHz (-) PL 79.7  
147.375 MHz (+) (temporarily offline)  
444.450 MHz (+) PL 79.7  
145.550 MHz (Packet)  
Echolink Node 52256

### WS4VA (D-Star)

145.320 MHz (-) WS4VA C  
447.275 MHz (-) WS4VA B  
1282.20 MHz (-) WS4VA A  
1298.40 MHz (Data) WS4VA A  
D-Star Gateway WS4VA G



For more information, go to  
<http://www.dstarusers.org>



WWW.ARRL.ORG