



# Stafford Area Radio Association

Amateur Radio - Emergency Communications - SKYWARN

## From the President:

I would like to thank you all for your vote of confidence in my abilities to lead SARA over this next year. I also want to thank our outgoing board members for their hard work and dedication over the past year! I want to assure you that with your help we will make significant advances in the plans that have been developed and the club has approved over the last few years. I do not intend on changing the primary focus or mission of our club which is "Operating and maintaining the SARA repeater system which allows local and transiting hams to enjoy this aspect of our hobby." Secondly, members of SARA provide Emergency Communications intend to continue. I want to stress that membership in SARA does not require anyone to volunteer or feel they must participate in any activity associated with or sponsored by the club. It is entirely up to the individual to decide how often they desire to participate.

I want to remind everyone that this club is your club and that you have elected the current board to carry out direction that the majority has and/or will approve. Therefore it is imperative that you let your voices be heard. Ham Radio is a great past time and allows everyone to chart their own course based on their individual interests. You can be as active as you want to be. So I encourage you to use the repeaters, attend our Saturday breakfasts, make suggestions, and vote!

My list of priorities for this year is as follows and is of course based on the support of both the club and the county:

- Echo Link
- Movement of equipment from lower shack to upper shack
- Replacement of Antenna on current tower
- Glendie build-out
- Review and update of SARA equipment insurance
- Increase in Internet bandwidth at the repeater site

I for one had pulled back from participating in Ham Clubs until I talked to Jerry WA3CVB a few times on the repeater. His description of this club and the no pressure, have fun atmosphere got me to join. I want to make sure that sentiment and philosophy continues to be promoted in our Club. If you have a great idea and want to run with it then go for it! If you want to have breakfast and rag chew on the repeaters come on down and have fun!

At the bottom of this newsletter is a calendar that will be kept updated and disseminated both on the club website and the newsletters. This is for your information and if you so desire to join in the activities please contact the individual who has either volunteered or been nominated to coordinate the event. There is no obligation in any way for any member of the club to participate.

Camping trips are a great way to get a few fellow hams out to participate in a contest or just to pick up some countries you don't currently have and it doesn't have to be a big affair. Caravanning to a local or regional hamfest is also a lot of fun. Of course you don't need a club to do these things but in a club you will find folks of similar interests and this alone can motivate you into doing other activities. Well enough of my rambling!

I just want to say I am looking forward to this next year as is your new board:

President:	Rich Corrigan (N0RMC)
Secretary:	Sig Gates (N4SIG)
Treasurer:	Dave Collins (N4WDC)
Member at Large:	Tom Harmon (AK1E)
Trustee:	Emmett Price (K3EP)

Also don't forget about the weekly Nets:

NCR D-STAR Net every Sunday at 1900 on the WS4VA D-STAR Repeater System  
S.A.R.A. D-STAR Net every Thursday at 1900 on the WS4VA D-STAR Repeater System  
S.A.R.A. Analog Net every Thursday at 2000 on the WW4VA Analog Repeater System

73's

Rich  
N0RMC

### **Trustee's Update:**

Overall, the repeater system is in good shape. The analog repeaters in particular have been running every day almost continuously for 3,000+ days (we had 2 half-day outages due to power and lightening issues).

WW4VA - Analog Systems: The two analog repeaters (145.27 and 444.450) are both running well. Occasionally I have been hearing about "poor repeater coverage" and "something is wrong" with the repeaters over the air, referring to coverage. A check of the power out and SWR indicates all is well. However, remember that any radiating system that is in operation over a period of time will degrade. In our case, the 2 1/2" hardline, the omni antenna, and the jumper cables from the hardline to the antenna on the cell tower (283') have been up for about 8 years, subjected to heat, cold, heavy wind (including Hurricane Isabel), snow, ice, rain, etc., every day. While the 2 1/2" hardline will only be slightly affected, the weather and the elements do take their toll on the antenna and jumper cable, which can degrade the transmit and receive signal. We have plans to replace both the antenna and jumper cables, but we are subject to the county's climbing schedule; and right now they don't have a date for tower work (but they will ... Remember they are putting up a 700 MHz public safety system and that tower hasn't been touched yet). Once that work is accomplished you should see some small improvement with

range and noise. But I still can reach both repeaters when at The Pentagon, just as I could 10 years ago when we first went on the cell tower. There will be days when coverage is poorer due to atmospheric, ducting, rain, etc.; and I can tell when we're having one of those days by listening to WTOP - I know the operating radius of both the DC frequency and the Fredericksburg frequency, and can tell when VHF/UHF propagation is generally poor (or good). So please keep all that in mind. Also, packet is working well; I recently checked it for SWR, power out, and input signal after some complaints and it is working fine.

WS4VA D-STAR Systems. The D-STAR system is running very well on all 4 frequencies (145.32, 447.275, 1282.20, and 1298.40), although our range on the 1.2 band is somewhat limited; we hope to fix that by Springtime as we move the D-STAR repeaters into the upper shack (see below). I have been experimenting with 1.2 Digital Data and am ready to experiment with streaming video. If anyone with an ID-1 wants to do some testing with me in the evenings, let me know. The heart of the D-STAR system is the computer based Gateway, which allows us to link to other D-STAR systems via the internet. N0RMC has been instrumental in keeping that running; be sure to thank Rich. We have a National Capitol Region net, formerly meeting on Thursdays, now on Sundays at 1900 hours on the 145.320 repeater. Please join us; if you don't have a D-STAR radio, make sure you put it on your Christmas list!

There are a few things we need to work on; some of these have been languishing for some time. They are:

1. Echolink. This has been like an albatross around my neck. When we moved Echolink from the lower shack (where it was on the 147.375 repeater) to the upper shack (because the lower shack went D-STAR), we ran into a ground loop which produced a loud buzz in the audio that I have not been able to get rid of (the ground loop was caused by different ground potentials via 3 connections: the internet wire from the lower shack, the power ground in the upper shack, and the antenna ground). I have tried filters, isolators, grounding everything in sight, etc., to no avail. Now we are about to bring internet from the lower shack to the upper shack via a RF link; hopefully that will fix the ground loop buzz since it eliminates one of the ground loops. KI4GZY installed the linking antennae, and N0RMC flashed a Linksys router to act as a Wireless Access Point, that we will install in the upper shack soon (we've tried it previously but the router was bad). I'll keep you posted.

2. Moving into the Upper Shack @ Garrisonville. Per Rich, we have been given a green light to take ownership of the upper shack (see Rich's comments in the Presidents Section). We still have to negotiate a MOA, but permission has been given to begin repairs and upgrades in preparation to moving the D-STAR rack in with the analog rack already in place. Initially we need to make repairs to the roof (shingling), and the eaves (holes from raccoon invasions). Then we need to insulate the interior, put plywood up in the ceiling, and mount some plywood on the walls. Finally we will be building a 4" high wooden platform to get the racks off the concrete. A separate email will be coming out before the end of the year with a proposed schedule to do all this.

3. Moving 1.2 to the cell tower. For some time we have wanted to extend the range of the 1.2 repeaters. Right now the 1.2 antennae on the water tower isn't providing the coverage we want. So we decided we would change the cell tower antenna (145.27/444.45 repeaters) to a tri-bander

(2/440/1.2); the 145.27 and 444.40 repeaters would remain on the cell tower, but we would add 1.2 to it as well. This will elevate the 1.2 repeaters from 180' to 283'. Hopefully this will allow some of our members to the South to get into the 1.2 repeaters and do some digital data work. This action is dependant on two things: replacing the antenna (which we've talked about above) and moving the D-STAR repeaters into the upper shack; which also necessitates extending the hardline from the water tank to the upper shack. Don't give up hope Jerry! We're working on it!

4. Bringing 147.375 FM analog repeater back on line at Glendie. The antenna and hardline are up. The new controller is in. All we are waiting for is permission to move in. This, however, is dependant on space. Right now the shelter at the Glendie site is packed full of gear ... The county has its 480 MHz system in place, and they are adding the 700 MHz gear now. So there is very little room to be found in there. But ... Their project Manager is working to find us about 10 rack units of space. Once he does that, we have been told we can move in.

As you can see, #2-4 above are totally dependant on the County. They have been great to us in allowing us space on their towers, so the last thing we want to do is be pushy. Even though we all want to do all these actions right away, we need to let time takes its course.

Four more things:

The 145.270 repeater is not producing a CTCSS tone so you can lock out all signals but those coming from our repeater. This was due to a near lightening strike which disabled the CTCSS board in the repeater. We plan on swapping the VXR-5000 repeater which we use on 145.270 with the VXR-5000 repeater which we use for 147.375. This will allow us to put the CTCSS tone back in operation on 145.27. Just be aware the 147.375 repeater, once on-line, will not have a transmitted CTCSS. However ... If you are having interference issues on 145.270 as many are complaining of, we need to address that. Even with the CTCSS working, you will have that interference in the background playing havoc with your reception. So ... Please email me (via the web page interface or the [trustee@ww4va.org](mailto:trustee@ww4va.org) email) of any interference issues you think are coming from the power company or more likely, the cable company. I have always offered to compile complaints and send them to the cable companies with "cc" to the appropriate county cable oversight committee; to date I have never received a written complaint.

At the business meeting several comments were made about the lack of documentation on how the repeaters work, polices, etc. Message received. FYI, all that used to be on the web page (I put it there) but as time went on as we changed webmasters and ISP's, that data has disappeared. So, I am writing a formal document titled the SARA Repeater System Operations Manual. When ready, I will give it to Ted to upload on our web page.

KI4GZY has graciously agreed to shoulder the responsibility of taking care of the analog repeaters. One reason we have not been able to do this in the past is, by agreement, we were limited in access to the upper shack. With the county's permission to make additional keys for the technical committee that is no longer an issue. NORMC continues to be the D-STAR guru, and I will remain the single Trustee for both repeaters and continue to do most of the controller programming. Thanks Dennis.

Last thing: We are looking for one more person to be on the technical committee. The person needs to be able to do simple trouble shooting if something goes awry, solder, use a VOM, SWR meter, follow simple schematics, be able to use an oscilloscope would be nice, be able to go to the repeater site at odd hours when something is not working, and have some knowledge of computers & networking (using Windows and Linux), Echolink, packet, and D-STAR. If you have some or all of this knowledge and want to help, let me know. I'll pass your names to the Board for approval.

That's about it for now.

73 de K3EP



## STAFFORD VOLUNTEER EMERGENCY RADIO COMMUNICATIONS



*Emergency Communications (EmComm) tip for this newsletter:*

### ARRL Communications Procedures

Voice	Code	Situation
Go ahead	K	Used after calling CQ, or at the end of a transmission, to indicate any station is invited to transmit.
Over	AR	Used after a call to a specific station, before the contact has been established.
	KN	Used at the end of any transmission when only the specific station contacted is invited to answer.
Stand by or wait	AS	A temporary interruption of the contact.
Roger	R	Indicates a transmission has been received correctly and in full.
Clear	SK	End of contact. SK is sent before the final identification.
Leaving the air or closing the station	CL	Indicates that a station is going off the air, and will not listen or answer any further calls. CL is sent after the final identification.



### VISIT OUR RADIO ROOM!

Dec 13<sup>th</sup> – A Tour of the Radio Room and JOC is available at 1500 to all EmComm Team members after the 1300-1500 license examination session at the Fire & Rescue Department’s training room. What? You’re not a member?! It’s easy to join! Visit <http://www.qsl.net/semcomm/registra.htm> for a county application form.

RSVP with Bart N3GQ at [n3gq@arrl.net](mailto:n3gq@arrl.net).

## CHANGE OF EXAMINATION SESSION DATES AND LOCATION



The Rappahannock Valley Area Volunteer Examiners Group will move its Amateur Radio license testing back to the Perkins Restaurant (I-95 Exit 133) effective in January 2010. Candidates will be able to take their tests on the 3<sup>rd</sup> Saturday of every month from 0700-0900. More testing info is available at [www.qsl.net/SEmComm/products.htm](http://www.qsl.net/SEmComm/products.htm) (click on the links). *Please be aware that testing occurs in a noisy restaurant environment!*



### PRE-REGISTRATIONS PREFERRED!

We accept walk-ins only if at least one person is already registered to take an exam. *Don't take the risk -- register (call or email) to take an exam!*

**Please Note** that Amateur Radio Examinations will not be started after 8:30 A.M. If you want to take more than one exam at a sitting (you can take all exams once for the same \$15 fee, if you pass them in succession), then you must arrive by 7 A.M. This policy allows our Volunteer Examiners to depart by 9 A.M. Thank you for your consideration of their time and effort.

### THE SARA THURSDAY NIGHT NET

A new feature has been added to our weekly net. In addition to the weekly "EmComm Tip of the Week, we are adding a "Question of the Week."

11-12-09 Question of the Week: "If you have a handheld transceiver (HT), do you have an antenna other than the original "rubber duckie" to use on it?" If you missed the net, send Bart N3GQ your answer to [n3gq@arrl.net](mailto:n3gq@arrl.net). Answers/statistics will be added to future newsletters.

#### 11-12-09 SARA Net Participation (NCS: Bart N3GQ):

- ✓ KJ4JUT Kevin / Fredericksburg
- ✓ W4NEZ Ed / Fredericksburg
- ✓ N4SIG Sig / Stafford
- ✓ W1BJC Bob / Indianhead, MD
- ✓ N5ALX Alex / Stafford
- ✓ N3XJN Dan / Dale City

11-05-09 SARA Net Participation (NCS: Bart N3GQ):

- ✎ KJ4PBO Anson / Fredericksburg
- ✎ W1BJC Bob / Indianhead, MD
- ✎ N4MID Lorenzo / Woodbridge
- ✎ AK1E Tom / Hartwood
- ✎ KU4C Jim / Fredericksburg
- ✎ N4SIG Sig / Stafford
- ✎ KI4JVE Harry / Stafford
- ✎ KF5DPT Scott / Unknown



## SKYWARN CLASS



The Stafford Area Radio Association hosted SKYWARN training at the Stafford County Public Safety Building. Twenty-eight individuals, many of which were amateur radio operators, attended. Greg Schoor from the Sterling office of the National Weather Service gave the Basics I presentation, which covered basic storm development, rotational movements, what constitutes reportable SKYWARN information, and the SKYWARN reporting mechanisms.

K3EP followed up with a short pitch on how the SKYWARN nets are activated, and issued a call for volunteers for anyone interested in being an NCS.

Emmett K3EP at [K3EP@arrl.net](mailto:K3EP@arrl.net).

More info about Skywarn is available at <http://www.qsl.net/semcomm/skywarn.htm>

<b>Date</b>	<b>Event</b>	<b>Coordinator</b>
10-Dec-09	Skywarn Class (7PM – 9PM)	K3EP
19-Dec-09	WW4VA/WS4VA Repeater Maintenance	K3EP/N0RMC
1-Jan-10	Straight Key Night	
15-Jan-10	Unofficial Club Meeting	N4SIG/N4WDC
TBD	Christmas Party	
3-Feb-10	ARRL RTTY Round-Up	
6-Feb-10	Frost Fest	
20-Feb-10	Unofficial Club Meeting	N4SIG/N4WDC
20-Feb-10	ARRL International DX Contest (CW)	
6-Mar-10	WW4VA/WS4VA Repeater Maintenance	K3EP/N0RMC
20-Mar-10	Unofficial Club Meeting	N4SIG/N4WDC
3-Apr-10	Equipment Check Up	AK1E
17-Apr-10	Unofficial Club Meeting	N4SIG/N4WDC
14-May-10	Dayton Hamvention	
15-May-10	Unofficial Club Meeting	N4SIG/N4WDC
16-May-10	Fredericksburg Historic Half Marathon	AK1E
5-Jun-10	WW4VA/WS4VA Repeater Maintenance	K3EP/N0RMC
12-Jun-10	ARRL June VHF QSO Party	N0RMC
19-Jun-10	Unofficial Club Meeting	N4SIG/N4WDC
26-Jun-10	Field Day	K3EP
17-Jul-10	Unofficial Club Meeting	N4SIG/N4WDC
1-Aug-10	ARRL UHF Contest	
21-Aug-10	Unofficial Club Meeting	N4SIG/N4WDC
21-Aug-10	ARRL 10 GHz and Up Contest	
21-Aug-10	Lighthouses on the Air	
4-Sep-10	WW4VA/WS4VA Repeater Maintenance	K3EP/N0RMC
11-Sep-10	ARRL September VHF QSO Party	N0RMC
18-Sep-10	Official Club Meeting	N4SIG/N4WDC
18-Sep-10	ARRL 10 GHz and Up Contest	
20-Nov-10	ARRL November Sweepstakes (Phone)	
4-Dec-10	WW4VA/WS4VA Repeater Maintenance	K3EP/N0RMC
21-Dec-10	Unofficial Club Meeting	N4SIG/N4WDC