# AARC Bulletin



# Amateur Radio News For AARC Members

Albemarle Amateur Radio Club

Charlottesville / Albemarle County, Virginia

Volume 2000, Issue 4

April 2000

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## Meeting Notice

The next regular AARC meeting will be held on April 11 at 7:30 PM, at the NRAO building at UVA. Greg Faust, N4PGS, will give a talk on the newest digital mode, PSK31, and the signal processing modes involved in this exciting new mode.

### AARC VE Testing on April 8

John Gray, W6UZ

The Albemarle Amateur Radio Club VE Group will conduct a VE test session as follows on **April 8, 2000 at 9:00 AM.**The testing will be held at the Auditorium of the National Radio Astronomy on UVA grounds (Edgemont Road – C'ville). All tests will be given, including code, etc.

#### PRIOR REGISTRATION IS REQUESTED.

Register by forwarding a completed FCC Form 605, with a list of elements you wish to sit for, Xerox copies of existing license and any CSCEs for which you wish credit, plus a check for \$6.65 made out to AARC VE Session. Mail these materials to John Gray, W6UZ, 110 Carrsbrook Court, Charlottesville, VA 22901. Pre-registration information should arrive by close of business on April 4, 2000.

For further information, please contact W6UZ at 804 973 1094 or via e-mail at jdgray@rlc.net.

### The President Speaks

Bob, K4DU

The other evening I was winging my way to South Africa at 35,000 ft. When you're on a fifteen-hour flight, after awhile you decide to get up and walk around. As I was walking down the aisle I noticed someone reading a magazine with a photo of a handheld, closer inspection revealed that it was a copy of QST. A conversation began. Sure enough another licensed ham! We talked about the hobby, what we were doing, how we got interested. Mike was originally from the Republic of South Africa, but he and all of his brothers had left there years ago. He was first interested in the hobby in his youth, but never had the time until just a few years ago when he met a ham in the neighborhood. He said it was the antennas on the house that sparked his interest.

So where am I going with this? My first point is that I noticed this young man because we had something in common, at first QST and obviously amateur radio. If he hadn't been reading QST, I might never have known that there was another ham on the flight.

I couldn't help but think that if we each did something to "advertise" our interest in the hobby in some way more

people would be drawn to amateur radio. Wearing our club jackets to meetings is nice, but it's something akin to preaching to the choir. Club jackets, call sign badges, shirts, hats, license plates, they all help get the message out.

My point is that each of us plays a part in the marketing of amateur radio. The hobby needs to grow and part of that process is letting people know about amateur radio and how much fun it really is! Yes, it is true I am a salesman deep down inside, but this is really the best kind of sale. Actually its not really a sale at all, it's letting others know about the best hobby in the world! (And probably the best kept secret in the world too!)

Call me crazy, but from the moment I first learned about amateur radio at age 11 something deep down inside of me said, "I want to be a ham!" The same was true for Mike too, but it may never have come to pass for him if it were not for that ham in his neighborhood with the antennas on the roof. If we do nothing more that show amateur radio to all of the young people in grades 6, 7 & 8 we will go a long way toward preserving the future of our great hobby.

So go talk to someone about amateur radio! 73, Bob

# Peep From The Veep

Dick, W4BZW

One of the results of the recent restructuring of the amateur radio service will be mass upgrading and the availability of HF operation to many amateurs. We are all familiar with the analog mode of voice communication and with the digital mode of on/off keying using the Morse code, known to us as CW. These are the primary communication modes for HF but there is another digital mode used on HF for many years employing the Baudot 5 bit code and frequency shift keying to transmit the information. This mode is called RTTY and provides good results under favorable signal to noise ratios. However, under noisy band conditions and an HF phenomenon called selective fading, its performance is severely degraded.

With the introduction of computers and in particular the sophisticated Digital Signal Processing (DSP) chips employed in computer sound cards, much more complex modulation and demodulation schemes have been developed that provide excellent performance in the presence of noise. The most recent of these is the PSK31 mode and it has become very popular on the HF bands. It has a very narrow bandwidth and employs a degree of error correction.

Greg (N4PGS) has been experimenting with and using this mode and he has agreed to give us a presentation at the next AARC club meeting on his experience with this mode. He will describe some of the PSK31 signal processing

techniques and will give guidelines for setting up your station and computer for this new high performance digital mode. Greg also plans to give an APRS update. I am looking forward to it. Hope to see you there.

73s, Dick W4BZW

### A Few Ideas

Harry, W2HD

Last month was full of anticipation for your new activity in Amateur Radio. We are now nearing the starting date for the new regulations. Several of you are ready to qualify for your up-grade status and others are getting ready for their next examinations. One point is common to all and that probably is the planning of the new station. This was briefly mentioned last month and now will be expanded in anticipation of some questions.

First of all, don't be prompted into buying an HF radio, which covers only one band and possibly one mode such as FM or CW. While such a radio can give you some enjoyment, it will very quickly lose its appeal as you proceed to explore the new bands you are now entitled to use. Also, be cautious if a tube-type rig all sparkling and new is offered at a very low price. It could be because the vacuum tubes are scarce or very expensive and you will spend all your spare dollars looking for and paying for replacement tubes. This is not to say that you may find a tube-type rig with spare tubes and should pass it up. No, it could be an excellent first-time rig and worth the lower price tag.

However, in the long run, you would be wise to seek out a solid-state rig with multi-band capabilities. It doesn't have to cover the WARC bands (30, 17 and 12 meters) to be lots of fun and enjoyment. It doesn't have to cover 160 meters, either, because the antenna could be a definite problem. It should cover 80, 40, 20, 15 and 10 or a majority of these very popular bands. Such equipment will cost a few extra dollars but is well worth the price and will provide enough flexibility to give you lots of enjoyment.

Last month the subject of antennas was raised and you were given the indication that a very modest antenna could provide fairly good results. Since most modern transceivers provide 50-ohm output impedance, it would be advantageous to have 50-ohm antennas. However, life isn't always that simple and you need an antenna coupler or some form of impedance-matching device to put power into the antenna you are able to use. Some of the transceivers have built-in matching devices... once again, at a price. If the transceiver of your selection doesn't have such a convenience, save a few dollars in your budget for an external antenna coupler. You might be able to visit a local ham with a good junk box and obtain parts for a home-brew matching device. (Reasonable and good experience!)

You're almost ready to put power into an antenna, but what antenna? That's another topic for another day. However, more important than all the words above are very simply... FIND YOURSELF AN "ELMER!" There are many of us ready to welcome you into the real world of Amateur Radio. Just call and we'll answer.

# Amateur Radio And Disaster Response With Other Service Organizations

Bob Mitchell, KE4VJW

We have known, from our beginnings in amateur radio, that "hams" are frequently called upon to provide emergency communications following disasters. We understand our needs, but what do we know about the needs of the organizations and agencies that we support.

In our region, we support various community activities, such as marathons and bike races, but these are easy. We have time to plan and strategically locate our people at places that have been designated weeks or months in advance. We know where we can contact the police or rescue, if we need them, and so on.

But what about during, or immediately following, a disaster. With whom do we coordinate? Who knows where we are most needed? Who is in charge of deciding which organizations get a ham operator and which don't? And most of all, what are the unique needs of each organization being supported by us?

In our area, as in most areas, the American Red Cross (ARC) is a major player in disaster response. We have participated in local drill exercises that include most local government emergency services agencies. We know we will support them. But there are other organizations that are major responders, and they may also need our support. Maybe they have their own ham operators. How would they interface with the rest of us who are providing support to government and emergency services agencies?

The best thing we can do is get to know as much as we can about the communication needs of each of the agencies and organizations we expect to support. We can take their training classes, if they, like the ARC, offer specific classes in disaster response. For those without specific training programs, we may need to just sit down with their leaders during peacetime and discuss their needs. This will probably take several sessions of moderate duration.

Since we have established a good working relationship with the ARC in this area, I will use them as an example of working with voluntary agencies. During a response, the ARC will set up a Disaster Operations Center (DOC), from which the managers will direct the field units. The field units may include damage assessment teams, mass care feeding units, and transportation and logistics operations. Some of these operations are quite time-critical, others less so.

Other responders, such as the Salvation Army and the Southern Baptists will have needs similar in nature to the ARC mass care operations. Other organizations, such as Adventist Community Services Disaster Response, who provide reception and distribution center (warehouse) management, will also have certain time-critical needs, but probably less so than either the ARC or the Salvation Army. The food and other supplies delivered to these service organizations or directly to the clients (victims) must be transported in a timely manner.

As you see, the proverbial spider web can expand rapidly. Many of us ham operators may already have real field experience with disaster response. We can share experiences with our fellow hams, so they can get up to speed more quickly, but getting to know the leadership in the various organizations during peacetime provides the best opportunity for success.

The American Red Cross, Adventist Community Services, The Church of the Brethren, and the Southern Baptists each offer training classes related to the services they provide during a response. Other major response organizations may also offer classes related to their response services. The Southern Baptists feeding trailer, based in Richmond, is equipped with ham radio equipment, among other classes of radios. They can often provide their own internal communications. Most other organizations don't have that internal strength, so they may call upon us for communications support.

Some of you may already be familiar with the organization "Voluntary Organizations Active in Disaster" (VOAD). This organization is national in structure (NVOAD), with state chapters in essentially every state. The major volunteer-based response organizations, including the ARRL, are members of NVOAD. Participating in state VOADs gives the state leaders of these organizations opportunities to learn about each other's needs during response and recovery efforts.

Many of the local amateur radio operators may already be members of one of the church organizations, and/or other volunteer-based response organizations, and therefore, may already be familiar with that organization's response communication needs. However, if you have questions about VOAD, or any of its member organizations, feel free to contact me. Arrangements can be made for a guest speaker to address local ham club meetings.

Article submitted by request, by Bob Mitchell (KE4VJW), Co-Disaster Response Coordinator for Adventist Community Services; member of Virginia VOAD Executive Committee

### Club Business

#### AARC Board Minutes Feb. 1, 2000

(Thanks to Mike Duvall (AC4ZQ) for taking the Board Minutes)

Dick recommended that the club pay Buck Rogers, K4ABT, \$30 for expenses related to his AARC packet presentation. A motion was made and approved to write a check for \$30 to Buck Rogers, K4ABT.

Bob, K4DU, requested that Mike, AC4ZQ, contact people that either have been, or might be, interested in packet and try to get them to come to the meeting.

Bob, K4DU requested Mike, AC4ZQ, to provide a copy of the equipment inventory list and loan agreement to the board. Mike agreed. Bob said he would email a copy of the list to the board members.

Mike indicated that there are several items on the club inventory list that we need more information on. In particular public service antennas and a set of 2m duplex cans. Pete, KC4UCK, indicated that he would talk to Greg at work or Hein. Mike will talk to Dave, K4DND.

Bob, K4DU asked Mike, AC4ZQ, to check with Hein to see if he has the cables for the 220 cans.

The board discussed writing a thank you letter concerning the phone line that MJH provided the club. A motion was made and approved.

Bob requested that Mike, AC4ZQ, give the club a date for the 911 patch to be operational at MJH.

There was discussion of site access and future sites. Bob requested Mike, AC4ZQ, come up with an access policy for 146.925 repeater, 146.76 repeater, 444.250 repeater, APRS, and the PBBS.

Jimmy, K4JMY, submitted a receipt for a motion detector light for the Piney Mountain site. Bob, K4DU, asked if the light was to be considered a permanent fixture, or something the club could remove if the club decided to leave the site. Jimmy indicated that the light would be club property and could be removed.

The Board discussed the tower the club bought from Grayson KF4FYI. A motion was made to treat the tower as a service provided to the club. In that regard the Board voted to treat the money spent on the tower as a rental. Bob asked Jimmy to present the Board's opinion to Grayson.

Pete brought up the aspects of safety and liability of the AARC for accidents. Mike agreed to look into the issue for the next Board meeting.

Bob, K4DU, agreed to provide reference documents for the 220 repeater to Mike, AC4ZQ.

Jimmy brought up the idea of putting at sign out in front of Comdial to get some publicity. Other members of the Board suggested getting the club's name in the local papers and periodicals.

Mike, AC4ZQ, suggested the AARC start providing refreshments at the club meetings again to encourage people to socialize after the meetings. A motion was made for the club to spend \$25-\$30 on refreshments for the meeting. Jimmy indicated that he would take care of the refreshments.

The next board meeting is scheduled to be at MJS. Mike, AC4ZQ, said he would look into getting a room at the downtown library.

Mike, N4HRO, brought up the subject of Field Day. After some discussion Bob, K4DU, requested that Mike contact Paul Dean, WB9HGZ, to see if he was interested in running the Field Day this year.

Bob, K4DU, had requested that Bow, K4QKH, provide a report to the board on the investigation into replacing the tower on the Piney Mountain site. Jimmy, K4JMY, indicated that the club's access to Piney Mountain was always considered temporary until the club finds a better site. Jimmy requested that the club not pursue replacing the tower on Piney until he could find out more on the "repeater site" he is investigating. The board agreed to place Bow's efforts, to replace the tower, on hold until Jimmy can get an answer.

Elmer, KF4UCI, said that he was working on a commercial 2m repeater that the club could use to replace 76. He stated that he would not donate the repeater to the club, but the club could us it as they wish. Mike, AC4ZQ indicate that this would improve the audio and solve several technical issues with the current repeater.

#### Regular Meeting Feb. 8, 2000

The Vice President, Dick (W4BZW), presided at the meeting in the absence of the President.

Buck Rogers (K4ABT) presented the Program. He presented a program related to Packet. He distributed a booklet "2 Packet Radio Books Under One Cover," Edited by Buck Rogers, K4ABT. It contains: "A Primer for the Packet Radio BEGINNER;" and "A Handbook for the ADVANCED Packer Radio System Node Operator."

Following the program:

The minutes, of the previous month, were approved.

Bill (KC4TQF) mentioned that information concerning the Dogwood Festival had arrived and if we wish to participate, we need to act soon. Participation is allotted on a first come basis.

Mike (AC4ZQ) indicated that efforts would be made to get 911 up during the upcoming weekend.

Greg (N4PGS) mentioned that bike activities were being held soon. Check with him, if you can participate.

The Elmer (KF4UCI) indicated that the APRS call sign has been changed to KF4UCI.

If you are interested in leading the Field Day activities, contact Mike (N4HRO).

Refreshments were made available for the meeting.

Meeting adjourned at 9:35

Submitted by Joseph D. Fritz, Secretary

#### Late Breaking News:

The 911 Autopatch is now active on 146.925 as voted by the AARC. All of the old functions work the same as now.

The Albemarle Amateur Radio Club Volunteer Examining Team will conduct a "Paper only" session on Saturday, 15 April 2000 at the NRAO (National Radio Astronomy Observatory) Auditorium on the UVA grounds from 0900 to 1200. No exams will be given!

Bring copies of all your paperwork confirming your up-grade status, plus a copy of your present license. We will be filing with the ARRL VEC and they require copies with the Special Form 605's forwarded. This means you must have (beside the copy of your license) any CSCE's from prior VE sessions, any copies of documents which confirm prior passing of elements (copies of old licenses and documentary evidence of prior license status.) A fee of \$6.65 will be collected to defray expenses.

No advance notice is required. If you have any questions, contact Harry Dannals, W2HD, 804-974-7388, or "on-the air" on any of the AARC repeaters, or via E-Mail at the originating address or w2hd@juno.com.

This session has been arranged to save you lots of miles of travel. Hope to BCNU... 73... Harry, W2HD

### Band Plan of the Month - 70 cm

Courtesy of ARRL Web Site

This month we present the band plan for 70 centimeters (the 440 band) as found on the ARRL Web site.

Freq (MHz)	Assigned Modes		
420.00-426.00	ATV repeater or simplex with 421.25		
	MHz video carrier control links		
	and experimental		
426.00-432.00	ATV simplex with 427.250 MHz		
	video carrier frequency		
432.00-432.07	EME (Earth-Moon-Earth)		
432.07-432.10	Weak signal CW		
432.10	70-cm calling frequency		
432.10-432.30	Mixed mode/weak signal work		
432.30-432.40	Propagation beacons		
432.40-433.00	Mixed mode/weak signal work		
433.00-435.00	Auxiliary/repeater links		
435.00-438.00	Satellite only (internationally)		
438.00-444.00	ATV repeater input with 439.250-		
-	MHz video carrier frequency and		
	repeater links		
442.00-445.00	Repeater inputs and outputs		
	(local option)		
445.00-447.00	Shared by auxiliary and control links,		
	repeaters and simplex (local option)		
446.00	National simplex frequency		
447.00-450.00	Repeater inputs and outputs		
	(local options)		

# Band Plans for the HF Bands

Courtesy of ARRL Web Site

Following are the band plans for the HF bands (80 through 10 meters, including the WARC bands) as found on the ARRL Web site.

160 Meters:		
Freq (MHz)	Assigned Modes	
1.800-1.830	CW, RTTY, other narrowband	
	modes	
1.830-1840	CW, RTTY, other narrowband	
	modes	
	Intercontinental QSOs only	
1.840-1850	CW, SSB, SSTV & wideband	
1.040 1000	modes	
	Intercontinental QSOs only	
1.850-2.000	CW, phone, SSTV, wideband	
1.050-2.000		
	modes	
80 Meters:		
Freq (MHz)	Assigned Modes	
3.590	RTTY DX	
3.580-3.620	RTTY	
3.620-3.635	Packet	
3.790-3.800	DX window	
3.845	SSTV	
3.885	AM calling frequency	
	C DAS RAIGH HOUSESMI (BUDEPING)	
40 Meters		
Freq (MHz)	Assigned Modes	
7.040	RTTY DX	
7.080-7.100	RTTY	
7.171	SSTV	
7.290	AM calling frequency	
7.290	Aw calling frequency	
30 Meters		
Freq (MHz)	Assigned Modes	
10.130-10.140	RTTY	
10.140-10.150	Packet	
20 Meters		
Freq (MHz)	Assigned Modes	
14.070-14.095	RTTY	
14.095-14.0995	Packet	
14.100	NCDXF Beacons	
14.1005-14.112	Packet	
14.230	SSTV	
14.286	AM calling frequency	
17 Meters		
Freq (MHz)	Assigned Modes	
18.100-18.105	RTTY	
18.105-18.110	Packet	
10.100-10.110	I donot	

15 Meters		
Freq (MHz)	Assigned Modes	
21.070-21.100	RTTY	
21.100-21.110	Packet	
21.340	SSTV	
12 Meters		
Freq (MHz)	Assigned Modes	
24.920-24.925	RTTY	
24.925-24.930	Packet	
10 Meters		
Freq (MHz)	Assigned Modes	
28.000-28.070	CW	
28.070-28.150	RTTY	
28.150-28.190	cw	
28.200-28.300	Beacons	
28.300-29.300	Phone	
28.680	SSTV	
29.000-29.200	AM	
29.300-29.510	Satellite Downlinks	
29.520-29.590	Repeater Inputs	
29.600	FM Simplex	
29.610-29.700	Repeater Outputs	

### AARC Classified Ads

This list contains FOR SALE or WANT listings for the last 30 days or so. All items must be related to amateur radio and must be surplus to the owners operation (i.e. no dealers or for profit). Price may be listed if desired

Note: Current month/week sale listings may be found on the **WA4TFZ bulletin board on 145.03 MHz**, the oldest continuous bulletin board in the state of Virginia. You can also find this list plus more on the internet at the WA4TFZ/AARC club page maintained by KD4RWX at **members.aol.com/wa4tfz/aarc**. Please note that all small letters must be used for this address.

New ADS may be placed directly to the Editor: 804 990-2659 or via E-mail at <u>k4uvt@yahoo.com</u>

Please let K4RKA know when items can be deleted from this file. Updated 3/9/00

3/9/00 FREE ITEMS!	Bruce, AA4CN has a FREEBIE magnetron, transformer & motor from microwave.
3/9/00 WANTED: EXTRA CLASS STUDY BOOK	Wanted by KS4NW
3/9/00 FOR SALE: BOX FANS	Available through Ron, K4RKA.  115 VAC 7 watt box fans, 120mm (4 3/4 inch) square. \$2 each. New old stock, and they run very quiet.
3/27/00 WANTED: ROTATOR	Bob, K4UVT, is looking for Ham-IV or Ham-V type rotator. Planning to put up 40' tower with a good-size Yagi on it this spring. Call Bob at (804) 990-2659 or email at k4uvt@yahoo.com

Hamfests of Some Note		
April 15, Chesapeake, VA	Chesapeake AR Service	
	Contact: Walton Hood, K4WYS	
	2125 Arbutus Circle Chesapeake, VA 23323	
	Phone: 757-487-0357 Email: wrhood@exis.net	

	New Calls!
Bryan Lovetere,	Also new address is: 6079 Chestnut
K4LTX	Lane, Gordonsville, VA 22942
Old call was KJ4LM	
The draw was fire	Upgrades
	None reported

#### VE Session Schedule - 2000 Judy Friel (804) 525-6142 2 PM April 9 Bedford (Walk-ins allowed) Location: Bedford Central Library 321 N Bridge St. (ARRL/VEC) Bedford, VA 24523 **Bedford ARC** Patricia A. Phelps (757) 421-9598 7 PM April 13 (Advance Registration Required -Chesapeake No walk-ins; please call) (ARRL/VEC) Location: Public Safety Building CARTS Training Classroom Fire Side Albemarle Drive Chesapeake, VA 23320 April 15 Pat Wilson (804) 932-9424 9 am Richmond (Advance Registration Required -No walk-ins; please call) Location: (ARRL/VEC) J. Sargeant Reynolds Comm. College Richmond ARC/RAVE 1651 E Parham Rd Bldg B, Room 201 RICHMOND, VA Raymond W. Crampton (540) 992-2844 April 16 Roanoke 2 PM (Walk-ins allowed) Location: American Red Cross (ARRL/VEC) 352 Church Ave. SW Roanoke VE Team

Birthdays This Month				
Apr 5	WA4MHP	LeRoy		
Apr 6	KD4RWX	Joe		
Apr 7	KF4AGT	Al		
Apr 10	W2PVY	Joe		
Apr 15	W2HD	Harry		
Apr 15	AD4YM	Jim		
Apr 17	N4FWA	Hein		
Apr 18	W4CAD	Jim		
Apr 29	KB4DJN	Elwood		

Roanoke, VA 24016

#### Albemarle Amateur Radio Club P.O. Box 6833 Charlottesville, VA 22906

http://members.aol.com/wa4tfz/aarc/default2.html





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ISSUE DEADLINE - 23rd of each month

Contact Information Daniel R. (Bob) Dorsey, Jr. K4UVT PO Box 977 Charlottesville, VA 22902-0977 (804) 990-2659 or bdorsey@cstone.ne

TO CORRECTLABEL INFORMATION CALL PHONE 973-1738: Your Lie KA4JJD G 2000 CURRENT MEMBER

Michael F. Rein 109 Sturbridge Rd. Charlottesville VA 22901

Next Club Meeting

April 11 - 7:30 PM

NRAO Bldg - UVA

#### CLUB MEETINGS and NETS

REGULAR Meeting: Second Tuesday of each month at 7:30 PM

BOARD & TECHNICAL Meetings: First Tuesday of each month at 7:30 PM

Meetings are held at the National Radio Astronomy Observatory (NRAO) building on Edgemont Road (UVA)

LUNCHEON: Wednesdays - Area hams gather at the Old Country Buffet (OCB) next to TOYS R US on Rte 29 North from 11 AM - 1 PM

Monday Night Information Net - Each Monday at 7:00 PM

YL Net: First Monday of each month at 8:30 PM

Northern Piedmont Emergency Net / Swap Net / Technical Session:

Each Thursday at 8:00 PM

All Nets are held on the 146.760 repeater

#### WA4TFZ REPEATERS

INPUT/OUTPUT Tone Access (If needed)

146.160/146.760 88.5 Hz

(If tone is enabled, you can turn the tone off and back on temporarily by:

Temporary Tone OFF

DTMF 325\* Remove Temporary Tone OFF **DTMF 326\*** 

**DTMF 10\*** 

**DTMF 700\*** 

Tone Status of Repeater

146.325/146.925

88.5 Hz (if enabled) 223.160/224.760 No Tone

449.250/444.250

151.4 Hz (If enabled)

145.030

MACHO Node

145.030

CHO Packet Bulletin Board

AARC CALENDAR OF EVENTS

DATE

**EVENT** 

April 11 May 9

Regular Club Meeting

June 13

Regular Club Meeting Regular Club Meeting AARC - PUBLIC SERVICE SCHEDULE

DATE

**EVENT** 

June 11-12

MS-150 Bike Event

July 7

Bike Virginia

Please sign up at meetings when the SIGN UP CLIPBOARD is passed around. You can also send an email to Greg (N4PGS) indicating your interest in working particular events.