

JEFFERSON REPORT

PUBLISHED BY THE JEFFERSON AMATEUR RADIO CLUB, INC. W5GAD

November 2009

The next meeting will be held at the JARC Clubhouse, Wally Pontiff Playground Please see w5gad.org for the latest information.

General Meeting:
November 19

Board Meeting:
December 10

**Open clubhouse:
Every Thursday 7:00pm**

ARES Coast Guard Net:
9:00 P.M. on 146.86-
(PL114.8)

www.w5gad.org
e-mail: w5gad@arrl.net;
Phone: 504-831-1613

Send newsletter items to:
w5ctv@arrl.net
Deadline: 2nd Friday of
the month



D-Star Forum/Meeting this Week

D Star Forum to Answer Questions

New technology always seems to peak our curiosity. Once peaked, we seem to turn our heads like the puppy who doesn't quite understand the noise or actions emanating from an object new to us. This was especially evident at the D-Star Forum at the New Orleans Hamfest last month.

Considering the interest in learning more about the technology available locally, the JARC will host a forum on Tuesday, November 17, 7:00 PM at the Jefferson Amateur Radio Club facility in the Wally Pontiff Playground. Dave Kleinatland, the W5GAD D-Star administrator will be there to answer any questions on what the system is, does, offers, and some how to's on programming some of the radios available. We may also be able to program some of the Icom D-Star radio's that you might have.

Come by and enjoy a cup of coffee and an eyeball Tuesday evening!

General Meeting One Week Early

The November general meeting will be held one week early, Thursday, November 19 to accommodate the Thanksgiving holiday. The meeting will be at the JARC clubhouse at 7:30.

New Member

The following have applied for membership to the Jefferson ARC and will be voted on at the next general meeting.

Conrad Appell, III, W5CHA, General, Metairie

Robert Bennet, pending call, Metairie

Christmas Party Scheduled

The annual JARC Christmas party has been scheduled for Sunday, December 13. It will begin at 11:00 AM and continue till we beat Atlanta! We are going to be doing this tailgate style at Rafael, W5BAI and Claudia's, LU3BAI/W5 home. No pot luck this year! We are asking that interested members contact Rafael or Claudia and let them know how many will be attending. The cost is \$15.00 per person. We will offer set ups but if you care for an adult beverage you must bring your own. If you care to share that is fine but the JARC will NOT supply anything alcoholic. Please RSVP no later than November 30 so that we can get enough food for everyone. There will be Bar B Que and all the fixins' as well as Vegan entrée's and a wide screen for watching the Plucking of the Dirty Bird, Atlanta Falcons during the party.

It looks to be a good time. Lets hope that our team is still undefeated for the party!

Member of the Year

Nominations are being accepted for Member of the Year for the 2009 year. Remember, Board members are not eligible for this award. Please submit your nomination and a brief statement as to why you are nominating them to Chris Vincent at w5ctv@arrl.net.



Cub Scouts Get on the Air at Campout

The Jefferson ARC and Pearl River County ARC recently teamed up to give a ham radio demonstration at the Southeast Louisiana Council's annual Cub Scout Fall Encampment. This was held at Salmen Scout Reservation near Kiln, MS. Approximately 2700 scouts, siblings and parents were in attendance and toured the two stations. The PCARC had an emergency communications trailer set up at one site and JARC had a solar powered station set up field day style on the other side of the campground. This allowed twice as many of the youth to sit at the radio and talk to each other between the two stations.

Coordinated by Scouter and new JARC member Jeffrey Coit, KA1USG this demonstration is hopefully the first of many more to come. There is usually a contingent of Scouting hams that sets up for Jamboree On The Air (JOTA) at Camp Salmen. However, this is the first demo to reach such a large audience of scouts at one time.

The stations were met with great enthusiasm by the scouts and their parents. Quite a few asked what was involved in getting licensed. With this exposure and future plans to work with the Boy Scouts in earning the Communications Merit Badge, we should start hearing some younger voices on the air in the not too distant future.

Special thanks go to Mike Villarrubia, AE5MW, Jeffrey Coit, KA1USG, Keith Barnes, W5KB, John Britton, KC5KWZ, Robert Bennet, call pending, and Chris Vincent W5CTV who represented JARC.



Top, The JARC station. Notice the solar panel in the foreground. We ran a green station to demonstrate setting up in the field with no outside power.

Middle and bottom right, Scouts try their hand at making

a contact with the other station on the other side of camp. We also made a contact with a station in Italy.

Right, Keith tells the boys about the station while Mike assists a scout during a QSO.

Bottom, Robert studies hard for his Technician license.



A, B, C's of Dx

Fundamentals of the Art of DXing

by: Don Boudreau, W5FKX

This month's excerpt is the continuation on tuning that ran last month.

Tuning Tips

Here are a few tips on how and when to tune, along with a brief discussion about DX Nets and "List" operations, and some suggestions for tweaking weak signals.

First, there are two categories of tuning: general tuning, in which no particular DX station is in mind; and selective tuning, in which one is in pursuit of a particular station, entity, mode-counter, or band-counter.

- General tuning

Beginning DXers will be looking for any interesting DX station to add to the log, so the best approach is to employ the technique of general tuning, in which all sections of all of the bands are fair game at any available time that one has for ham radio. Learning to use this method is particularly important for beginning DXers in order to develop and hone the listening skills that will be useful in the future when, after working the most readily available DX, the pursuit becomes more selective. Here is a simple, point-by-point description of the general tuning technique:

* Begin by switching your receiver to the bottom of the highest frequency HF band and quickly, but deliberately tune from the bottom (CW) to the top (phone) portion of that band, switching among modes of interest (CW, RTTY, PSK, SSB) as appropriate to the segment of the band, looking for any sign of activity. If you find none after a sweep, then go to the next lowest.

* The highest frequency band in which you can hear any activity will be the maximum usable frequency (MUF) and will vary with the time-of-day, time-of-year, and the solar activity cycle. Generally, this may be your best bet for interesting DX.

* Once the highest frequency band is determined, begin to slowly tune up the band. If you enjoy multi-mode operation, then start with CW, switching to PSK/RTTY, and SSB as you progress through the band segments, listening to - and trying to identify - each station that you hear. The reason for this is not only to find a new DX station to contact, but also to observe the propagation characteristics. If you are chasing Estonia (prefix: ES) for a new one, it would be very encouraging to hear a station in neighboring Latvia (YL) or Lithuania (LY).

* Listen for some tell-tale signs of DX: weak signal, signal with polar flutter; accented speech; callsign of interest (or unrecognized), station giving rapid signal reports, station saying

"up", or a pileup.

* More about modes of operation in the Equipment chapter; however, here are some key points for tuning:

o SSB mode is the most commonly used; a bandwidth filter of 1.8 - 2.4 KHz is a good choice.

o CW mode is the second most popular; a bandwidth filter of 450- 600 Hz is recommended; some experienced tuners use 250 Hz BW filters, and very experienced operators use 100 Hz or less.

o Although RTTY and PSK are the least used of the available modes as they require additional equipment, connections, and operational skills, they should not be discounted as they provide an excellent gateway to a great deal of DX, usually with less competition than the other modes.

* If the noise level seems high, reduce the receiver gain by turning down the RF Gain control and/or inserting some front-end attenuation (see notes below on "weak signal reception").

* After completing your "pass" over the band, you can either begin again or, if you didn't hear any signals of interest on that band, then drop down to the next lowest available frequency band. Just tune and listen, tune and listen, ... successful DXing is a game of P.E.P.S.I..

* While you're tuning, you should also be monitoring the spots on a DX Cluster.

When you find something of interest, begin planning how to make a contact, the techniques for which are discussed in the next chapter on "The QSO". That's it! Simple as it sounds, you will find that it does require considerable P.E.P.S.I. to be a good tuner.

- Selective tuning

After you have been at the DXing game for awhile, you will (1) begin to have a better "feel" for where and when to find DX, (2) have a list of "needs" showing the entities that you have not yet worked, and (3) will know of up-coming DX station operations of interest to you. At this point, you may well become more selective in your tuning. While the actual technique is the same as for general tuning, the way it is applied is different. The most frequent use of selective tuning is when information is available about the operating habits of a station of interest. For example, perhaps 5V (Togo) is on your "Needs" list, but despite all of your diligent tuning, you still have not yet heard any stations there yet. The reason may well be that there are no active resident hams. However, you come across a note in one of the DX bulletins about a VE operator who is expected to be active there for two weeks, beginning on 15 March. The blurb also mentions that the operator expects to concentrate on 20 meter CW. Although that is several months away, you immediately make note of it on your handy desk calendar, and continue your general tuning until the day before the operation is to begin. Then, on 14 March, you go into your selective tuning mode:

* Determine the local sunrise and sunset times for 5V (see References) and convert that into your local time so that you can definitely plan to be at the radio then. These grayline times are frequently not only the best propagation times, but are also typically the most reasonable times for someone on holiday to operate - before breakfast and before dinner! A convenient source of sunrise/sunset times (and beam headings) by prefix is available as a feature of DXTelNet, the software package mentioned above that allows access to the DX cluster network - a "must" for DXers.

* You should also estimate the optimal times and MUF for propagation between your location and 5V by using propagation prediction software (see References; also, see the "Propagation" chapter for more info on propagation and MUF). An added benefit of propagation software is that it will usually indicate the sunrise/sunset times for the entity of interest, along with beam headings for short path and long path if you happen to have a directional antenna. [Note: If the predictions indicate that few or no frequencies will be usable, don't be deterred, as prediction software are based upon statistical calculations that provide estimates of average propagation for a month at a time. If the predicted conditions are not found on a given day, try again the next - on average, the predictions will hold up! Also, try tuning on all of the bands of interest - the software is only a guide and is far from perfect!

* Look through your log for any contacts that you may have made with stations located in entities near 5V in order to estimate the best time to expect good signals. Of course, differing times of year and solar conditions may make such estimates highly variable, but you should make use every bit of information that you can gather.

* Do a "Spot Search" for "5V" on the DX cluster that you use (you ARE using it, aren't you??), or on the DX Summit website. This may turn up some spots of previous activity, giving you some indication of the times of best propagation between 5V and the station(s) posting the spot(s).

* Begin tuning at the appointed time (of course it doesn't hurt to be early!), following the general tuning procedure, but concentrating upon the band of frequencies for the expected activity. If the operation is from a rare location and your station is modest, it is especially important to be early, as very often the first few stations to hear the beginning activity will have the easiest time of working the DX station before the pileup begins!

Depending upon the extent of the information that one collects about a particular DX station activity or the plans for a forthcoming DXpedition, selective tuning can be applied broadly (e.g., over many bands for several modes) or specifically (e.g., a single frequency, mode, and/or time). A notable case of the latter occurred when P5/4L4FN first became active from North Korea, a country in which ham activity had always been banned.

After a pair of very limited operations by one of the icons of DXing, Martti Laine, OH2BH, in which a few hundred contacts were made as a demonstration of amateur radio activity, North Korea (P5) was officially added to the DXCC list in early 1995. The DXing community was ecstatic and anticipated an easing of restrictions on ham radio following these sanctioned demonstrations. However, much to our collective disappointment, this did not happen. Since P5 had been officially added to the DXCC list, that meant that anyone who did not work the limited operation (most of the world!) was now one entity short of having "worked 'em all". Despite many attempts by other notable DXers through the end of the decade of the 1990's, no further ham radio activity was allowed. Then, in November of 2000, without prior notice or fanfare, a station began to operate with the callsign P5/4L4FN. Despite the fact that many proclaimed this to be a pirate operation, the experienced DXers knew to WFWL! The operator, Ed, from the Georgian Republic (4L), said that he was with the World Food Program of the UN, and was operating from Pyongyang with a small transceiver and a wire antenna. He indicated that he was not a DXer; however, he soon began to respond more openly to the increasing pileups, trying to accommodate as many of the clamoring DXers as he could. Initially, the only activity was on 28.475 MHz SSB between the hours of 2200 - 0200 UTC. Although the frequency of operation changed to 21.225 MHz after a few months, and he also broadened his time of operation to include 0330 - 0630 UTC and 1100 - 1330 UTC, the tuning for this very rare DX station remained highly selective, generating huge pileups of thousands of stations calling simultaneously.

When the operation was finally approved for DXCC credit in March, 2001, one could almost feel the heat of the joy that emanated from the DXing community! For many of The Deserving, it meant the Top of the Honor Role at last!

- DX Nets

Apart from tuning, there is another way in which some DX stations may be found and contacted, and that is on a HF DX Net operation. A typical HF DX Net meets regularly at a specified time and frequency for the purpose of attracting both local and DX stations to check in, giving each the opportunity to work one another, and it may also provide some useful DX information (see the chapter on DX Info Sources for access to DX net schedules). Note that there are both HF and VHF/UHF DX Nets. The VHF/UHF DX nets are local meetings usually sponsored by DX Clubs to provide a local on-the-air forum for discussion of DXing and for the dissemination of DX news, whereas the HF DX nets have worldwide participation. In this chapter, discussion of nets and lists will refer to HF DXing.

The usual procedure on a HF DX net is for the Net Control Station (NCS) to begin the net with some brief introduction, statement of purpose, and a summary of the net protocol. Regu-

lar check-ins are then taken, either by role call or area, and then the NCS calls for any DX stations to check in. If there are no DX stations, the NCS may proceed with some announcements or news, allowing time for stragglers to tune into the net. If there are several DX check-ins, the NCS will then ask whether anyone wants to make a “DX call”, and will stand by to take down any stations, along with the DX station of their choice. In some instances, a relatively rare DX station will check into the net creating a pileup when the NCS asks if anyone would like to make a call. In such cases, the NCS will resort to the List Operation procedure discussed under "pileups" in the chapter on “The Contact”.

It must be mentioned that the use of DX nets to work DX does not meet with universal approval all DXers. Many DXers feel that it is an un-sportsmanlike approach and should not be used. The reasons given are many; here are a few of the criticisms:

- * it hasn't anything to do with “real” DXing
- * it is the lazy person’s way of working DX
- * it is sometimes (or: “often”, “always”) used to cheat at DXing, i.e.,
 - o NCS repeats the callsigns and reports, so stations that cannot copy can still log contacts
 - o stations call NCS on telephone and get on the list when others cannot
 - o NCS often “plays favorites” in taking lists and/or assisting with contacts

As with any of the myriad human endeavors, some of these criticisms are probably valid in some cases; however, it is highly doubtful that there is a DXer alive today that has not participated in some form of “DX Net” protocol at some time or other in order to work a needed station. Indeed, there have been several occasions in which a relatively rare DX station preferred to operate solely on DX Nets and could only be found there. This is usually due to a combination of factors: an inexperienced operator in a high-demand DX location who may not have a very good command of English, the de facto universal language of ham radio. Being a DX station, especially in a rare location, is not for the timid! It is patently unfair for anyone who has not been “on the other side” of a DX pileup to criticize a novice DX operator for using the assistance of a DX Net. It is also unfair to suggest that all DX Net activities are bogus or otherwise unacceptable. DXing, as a facet of ham radio, is a hobby. As in any hobby, the satisfaction provided is a personal thing that is to be judged by the individual and not the group. Therefore, those who enjoy the DX contacts afforded by DX Nets should be allowed to do so without rude commentary by others.

A final word on DX Nets must include this caveat: the number of DX entities that one can work in this manner is very

limited in comparison to the methods of tuning that have been discussed. While you should certainly feel free to learn about and explore the available DX Nets, do not do so at the expense of developing your complete DX skills!

- Weak Signal Reception

Often, the signal of most interest will be weak and “in the noise”. Here are a few tips on weak signal reception for improving the Signal-to-noise ratio:

- * If using a beam, try different headings, including long-path.
- * If available, try different antennas for receive - some may be less prone to noise than others.
- * Try different filter bandwidths; usually narrow is better, but experiment! (SSB: 1.7-2.4KHz; CW: 50-300Hz)
- * Decrease the receiver RF gain to reduce noise amplification and compensate by turning up the Audio gain (if the noise is low enough, the ear-brain detector system may be able to better perceive the signal):
 - o Reduce the RF gain control setting
 - o Turn off RF preamp
 - o Insert 6-18db of front-end attenuation
- * Switch the Automatic Gain Control (AGC) to Fast (preferred default for DXing), or turn it off.

If all of this fails to improve the reception of the signal that you know it is a DX station you need, then just wait and keep listening, because conditions very often fluctuate significantly in time, and the signal strength may build up enough for you to hear. Be ready to give a call and make the contact quickly, as improved conditions may last just for a minute or two, or even only a few seconds!

- One more word about Signal Reception

If you operate on CW, you undoubtedly noticed that you can change the tonal pitch of the received signals by using the “Pitch” control on the receiver, or by slightly changing the frequency. In the Equipment chapter, we will discuss Receiver capabilities, such as sensitivity and selectivity, that are important for DXers; but perhaps this is a good point to mention another aspect of signal detection that comes to play when we are tuning. It is that each person’s hearing may be different, although we rarely appreciate this during normal everyday conversation. However, our aural sensitivity and selectivity capabilities are more of an issue when we are tuning for CW signals, and especially when we are searching for weak signal DX! In late 2006, Eric, K3NA, posted an interesting comment on the Topband reflector in regard to adjustment of CW pitch, that led me to draw the receiver analogies below. (See also his subsequent 2-part article, “Can I Hear You Now? Adjusting the Receiver Audio Chain”, in the Nov/Dec 2006 and Jan/Feb 2007 issues of the National Contest Journal - www.ncjweb.com/; also check Eric’s website at www.k3na.org/ for a future posting of the article).

We know that our hearing abilities result from the ear-brain system. Much like the specification of receiver capabilities, we can also categorize the key aspects of our human hearing system. Here are three that DXers may want to consider more closely (Note - the terms in parentheses are those used in audiology):

* Tone sensitivity (pitch detection) is the ability to hear a particular tonal frequency. As multiple tonal frequencies mix in the ear and/or tone frequency changes, it takes the ear-brain system some period of time (a few tonal cycles) to process and interpret the change. Difference in this capability may be important in copying CW, where one is trying to process tones that may be fading while being turned on/off fairly rapidly.

* Tone selectivity (pitch discrimination) is the ability to discriminate between different tonal frequencies. Generally, we can differentiate between lower frequency tones more easily than between higher frequency tones, and there is usually a range (band) of tonal frequencies over which this discrimination capability is optimal.

* Tone blocking (tone masking) is the phenomenon in which loud tones can obstruct the ear-brain ability to detect adjacent higher-frequency tones of lower amplitude. Reported by AT&T scientists in 1924 ("The Auditory Masking of One Pure Tone by Another and its Probable Relation to the Dynamics of the Inner Ear". Wegel RL, Lane CE. Phys. Rev. (23): 266-285, 1924), they found that "When the masking tone is loud it masks tones of higher frequency better than those of frequency lower than itself."

From this, we can draw these conclusions: (i) there is a band of tonal frequencies that are optimally perceptible to each of us; (ii) if we select the lowest tonal frequency within this band that we can readily hear (detect), it may be the best for CW tuning, as it will be most readily heard and suffer the least amount of blocking by nearby loud higher-frequency tones.

Usually, most of us will just defer to the manufacturer's default settings for the pitch of a CW signal when the receiver bandpass is centered on the desired signal, and that tone is generally 900 - 1,000 Hz. However, this may not be the best setting for reception under difficult conditions. How does one

determine which tonal frequencies are best? Personal preference and experience usually provides a pretty accurate selection process, but if you want to approach it more analytically, the "Hearing & Speech Lab" at the University of California at Irvine has a really interesting online test at www.ucihs.uci.edu/hesp. Give it a try ... it may help you to work that really rare one some day!

Thanks to Eric Scace, K3NA, for his comments and info for this section.

- WHEN should I do General Tuning?

The answer to this question is very simple: aside from all of the issues of propagation and/or prior information, the "best time" to tune is any time that you have a few minutes! Local sunrise and sunset can often provide good propagation conditions, so these should be prime times on your list. For the most likely bands and times, review the band-characteristics summary above, along with the chapter on Propagation, then begin to learn about your local propagation conditions as a function of the phase of the Solar cycle.

As a rule, make it a habit to try to tune for awhile before leaving home in the morning, or during lunch break if you're lucky enough to be home for lunch, or before and after dinner in the early evening, and finally just before bedtime. Begin on the highest frequency band for which you can hear any signals, working your way down through the lower frequency bands. If you're still unfamiliar with the characteristics of the various bands, review the chapter on "RF Propagation", and take a look at the info posted on the DX 101 website below. As noted before, the early morning/evening times within your grayline usually provide opportune propagation conditions, not only by short path, but also frequently by long path. Remember that even 15 minutes of tuning at peak propagation times can often be very productive, once you learn how to do it.

Plan on occasionally tuning during late evening-early morning hours, especially on the 40, 80, & 160m bands. For DXers in North America, late evenings correspond to dawn in the Middle East, Europe, and Africa, while early mornings cover times of sunset in the far-Pacific, Asia, and Australia. Whenever you are tuning, always keep in mind what time of the day it is in the far-reaches of the DX world!

Finally, when you begin to stalk particular DX stations, you will want to use the propagation prediction software described above to provide a guide for tuning times. When tuning for a particular station (or location), determine the times of the local sun-rise/set there, as these can also be prime propagation times from that location. For the path between your location and any specified DXCC entity, this type of software will estimate optimal times and frequencies, depending upon the level of solar activity on the days of interest.

Next month...The QSO

DX News

PACIFIC TOUR. Just a reminder that Chris, DO7AG, is expected to be in the South Pacific with his family between November and January. He plans to be active as 5W1QX from Western Samoa and A31CE from Tonga. Activity will only be on 40 and 20 meters (this is due to the type of license he has). Complete dates of activation have not been announced yet. Be listening.

December 2009						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
29	30	1 9:00 p SELA/Coast Guard Auxiliary Net	2	3 7:00 p JARC Open House 8:00 p WARC Net 146.94	4	5 7:00 p DDXA Holiday Party
6	7	8 9:00 p SELA/Coast Guard Auxiliary Net	9 7:00 p WARC General Meeting at Picadilly's on Lapalco	10 7:00 p JARC Open House 7:30 p JARC Board Meeting 8:00 p WARC Net 146.94	11	12
13 11:00 a JARC Christmas Party	14	15 9:00 p SELA/Coast Guard Auxiliary Net	16	17 7:00 p JARC Open House 8:00 p WARC Net 146.94	18	19
20	21	22 9:00 p SELA/Coast Guard Auxiliary Net	23	24 8:00 p WARC Net 146.94	25	26
27	28	29 9:00 p SELA/Coast Guard Auxiliary Net	30	31 8:00 p WARC Net 146.94	1	2

JEFFERSON AMATEUR RADIO CLUB • APPLICATION FOR MEMBERSHIP • PLEASE PRINT CLEARLY.

Name _____ Callsign _____ Areas of interest: _____

Address _____

City, State, Zip _____ Occupation _____

License Class _____ Spouse's Name _____ E-mail address _____

Home Phone _____ Work Phone _____ Ever been issued a Notice of Apparent Liability? Yes ___ No ___

Membership Desired: Full (\$36) _____ Family (\$18) _____ Associate (\$36) _____ Student (\$18) _____

Family membership is full membership plus \$18 for each additional up to a maximum of \$72. Attach a separate application for each family member.

Do you wish to not disclose your contact information with other members of the club? Yes ___ No ___

Signature _____ Date _____ Sponsor _____ Date _____

Please enclose dues and mail to: JARC, P.O. Box 73665, Metairie, LA 70033

New Antenna's Coming Online

With the contest season upon us the JARC will be continuing to improve it's antenna system. We will be adding a SteppIR 3 element yagi (at right is one used in Antarctica during 75 mph winds) and 2 element

homebrew 40 meter yagi (like shown below) to the top of the main tower. We hope to have this system up and running within the next 3-4 weeks. We are awaiting the delivery of some of the parts



to complete the construction of these antenna's.

If you would like to help with the installation of these antenna's, please notify one your Board members at their numbers listed below.



DXCC NEWS.....

Bill Moore, NC1L, ARRL Awards Branch Manager, reports that the following operation is approved for DXCC credit: YI9TM - Iraq; Current Operation

7O1YGF REMINDER. Bill Moore, NC1L, ARRL Awards Branch Manager, states: "This is a reminder that free update for 7O1YGF Yemen cards will expire on December 31, 2009. Starting January 1, 2010 normal submission fees will apply. If you are planning to submit an update for this operation I strongly recommend that you do not wait for the last minute as mail around the holiday season is very heavy and delays can occur. All DXCC needs is the card and SASE, or, in LoTW do an application with just 7O1YGF and remember to select payment by mail on Part four and leave the paper QSO number at zero on Part two."



The JARC has a NEW Yaesu G-800SA rotator for sale for \$300.00 OBO.

Contact Keith, W5KB for more information.



VE Corner

The JARC offers 2 VE Testing opportunities available in next 30 days.

With increased interest in amateur radio, and a need for more opportunities for upgrade and new licensing, the JARC VEC will begin testing once per month. The first session will be Monday evening, November 23, at 7:00 PM at the JARC facility in the Wally Pontiff Playground. The second will be Saturday, December 12, at 9:00 AM at the club.

The JARC will continue with offering a weeknight session, on the third Monday of every odd numbered month, and a weekend session on the second Saturday of even months. Holidays of course will supercede any testing sessions and some may be rescheduled due to Hamfests that are in the region on the same days. Testing fees continue to be \$14.00 and typical proof via a copy of your license or CSCE as well and a picture ID is required. Any questions can be asked by sending an email to w5gad_vec at w5gad.org.

JARC Board Of Directors 2009

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All phone numbers use the 504 area code.