

# CLALLAM COUNTY Amateur Radio Club



# **BV Rambles:**

Well I have to admit it is 1430 on Sunday kind of a later start than I wanted for the QTC. I came back from the Puyallup Flea-market yesterday (having left here on Thursday) and said to myself I would get on the QTC after breakfast Sunday – but I got involved helping Karen get the tractor started for the first time this year, and a fire started for some of the smaller trees she has been clearing out of our woods that were blown over in the storms of 2006-2007.

Having lived in Kirkland, and having had a business in Bellevue for eight years before moving up here, I became a member, and still am, of the Mike and Key Club. The Puyallup Fleamarket is their big fund raising event of the year. I think this is my 10<sup>th</sup> year of working at the event. Even with 200+ members they welcome anyone who will put it a few hours of labor on Friday or early Saturday morning. For this they wave the entrance fee, but most importantly, you can look over the incoming venders as they set up on Friday, and early Saturday before the public enters. Several Clallam County Club members took advantage of this by working or buying a table, which gained them a jump on finding what they wanted. Janet, WA7JEP bought a power supply right out of the front seat of a venders truck as he was unloading.

Another club of possible interest is the Western Washington DX Club, which, as its title indicates is a DX club, but its membership contains a large percentage of the active contesters in western Washington. Benefits of belonging (paying \$20 a year) is a newsletter, a DX cluster and an Email reflector which is pretty active during DXpeditions as to what frequency and times guys are working the DXpeditions. See http://www.wwdxc.org/ for more information.

At the flea market other clubs and groups from around Western Washington had information tables, as well as the ARRL, and WA ARES staff were there to answer questions.

We had, or should I say Dennis, WA6QWK had a very productive day March 1<sup>st</sup> where, I think, there were eleven Boy Scouts who passed their Radio merit badge. About five or six of them said they were interested in getting an Amateur Radio License. Hopefully we will be able to tap into this enthusiasm generated by Dennis's had work. David McCoy and I went along for support to Dennis. And a big thanks to Dick, VE7GAU; Ed, VE7ED: and Gary, KD7MWL who were kind enough to spend some of their Saturday talking to each of the Boy Scouts via 2-meters. As some of the scouts were from Jefferson County, Gary, KD7MWL came over to the location in Chimacum to pass out a flyer and talk about Jefferson County's club, ARES and VE sessions in Jefferson County.

Again thank you for the time and space..

Chuck, N7BV

# **Get Your License Here!**

The Clallam County Amateur Radio Club will hold Technician and General level classes April 12, 19, and 26th at the Port Angeles fire station on 5th & Laurel.

On April 26th at 1300 an open testing session be given.

Books are available from Tom, KE7XX.

Please spread the word to anyone of interest.

Thanks!

Contact: Chuck Jones, 452-4672 or Tom Newcomb 452-8228

Guess What! It's dues time again. The By-laws call for dues to be paid in the first quarter of the year.

To support our club and our repeater we need to stay current with our dues. See David McCoy at a meeting or mail a check for \$20.00, made out to CCARC, to: PO Box 2562 Sequim, WA 98382

As of March 31st those who have not paid their dues will be deleted from the QTC Email list.

We need articles for the QTC newsletter. This is after all your newsletter.

Tell us how you became interested in Ham Radio. What did you do over the summer (just like school) huh!

The more you submit the less the better our newsletter will be.

Thanks, the staff!

## EXTRA EXTRA READ ALL ABOUT IT

The Extra class (Element 4) was released December 1, 2007 and will become effective July 1, 2008.

The current Extra Pool will be valid until June 30, 2008.

#### **Electronics Fundamentals class**

15 March
5 April
10 May
19 June

Paul Honore' W6IAM

#### PROGRAM FOR 12 March 08

Dennis Tilton, KE7KZS, and Bob Kennedy, AC7RK, will demonstrate PSK31 using a homebrew interface box, PSK Meter kit and desktop computer. They will also demonstrate Software Defined Radio (SDR) using a low-cost SoftRock v6.2 20/30m kit with a homebrew 10W Amp.

These demonstrations will show the power of computer sound card technology and its exciting future possibilities.

A little background on Dennis (I couldn't get Bob's info at the time, but we all know him in one way or another from his years with the club!) Originally Dennis was licensed in 1961. He loved working CW and SSB and homebrewing equipment. He gave up his license in 1971 due to time pressures raising five children and working. He worked in Silicon Valley for thirty-five years starting as an electronic tech and progressing to electro/mechanical design engineer, assembly language programmer and process development engineer. Dennis was able to retire in 2003 and got re-licensed in 2007 as KE7KZS. Shortly afterward, he received his old call back, WA6QWK

# **2 METER NETS**

## CCARC :

Every Thursday 7:00 pm on the W7FEL Repeater.

#### ARES/RACES:

Every Tuesday except 1st Tuesday of the month at 7:00 pm on W7FEL Repeater.

W7FEL Repeater: 146.76 MHz., offset down 600 KHz. with a tone of 100 Hz.

Here is a portion of the opening page to a new program by VE3NEA. Read all about it at http:// www.dxatlas.com/ Operators have started using it for propagation purposes by setting up receive sites where you can read the callsigns heard, enabling you to see if you are being heard say on the East coast. Kind of a reverse Beacon system.

Look over some of his other programs, they are all very well written and useful. Some are free some aren't. 73, Chuck N7BV

# CW Skimmer 1.0

Multi-channel CW decoder and analyzer for Windows 98/ME/2000/XP

## Features

- a very sensitive CW decoding algorithm based on the methods of Bayesian statistics;
- simultaneous decoding of ALL cw signals in the receiver passband up to 700 signals can be decoded in parallel on a 3-GHz P4 if a wideband receiver is used;
- a fast waterfall display, with a resolution sufficient for reading Morse Code dots and dashes visually;
- the callsigns are extracted from the decoded messages, and the traces on the waterfall are labeled with stations' callsigns;
- a DSP processor with a noise blanker, AGC, and a sharp, variable-bandwidth CW filter;
- an I/Q Recorder and player.



### CLALLAM COUNTY AMATEUR RADIO CLUB Minutes of the General Meeting February 13, 2008

The meeting was called to order at 7:00 P.M. by club president, Chuck, N7BV.

The Pledge of Allegiance was given.

An old club sign-in book and a gift gavel (from the Canadian Hams) commemorating the club's 50<sup>th</sup> year were passed around for all to see, and introductions were made around.

A motion was made that the minutes of the General meeting of January and the Board of Directors meeting in January be approved as published. Seconded and carried.

Bob AC7RK introduced the guest speaker, Jerry Nichols. Mr. Nichols is an airplane pilot who is interested in merging aviation and Ham radio communication capability in an emergency. He counseled the group to "Know your equipment, be flexible, practice, and think about it." He expressed interest in trying things such as an airborne repeater, also. He gave members a brand new map of the area.

After break, Dennis WA6QWK reported on the progress of the Youth Outreach program. With a goal of sparking student interest and helping students learn about radio and electronics, contact has been made with school officials to the end that the club can set up demonstrations, etc., including linking the school to the ARISS satellite. The effort is continuing.

Mike KE7EZO announced the next month's ARES meeting program will be presented by the Border Patrol. The month after, Jamye from the County EMD will present "WEB EOC".

Tom KE7XX advised that the new Extra Class question pool has been published. The old questions will be used until July, so anyone testing in April will be tested on those. Tom KE7XX or Chuck N7BV will help broker the resale of the current Technician manual if anyone wants to resell their manuals.

Paul W6IAM said he is ready to go with the electronics course he has created. The class location could be in Carlsborg or elsewhere depending on the class need. Saturday seemed to be the favorite day for the class.

Chuck N7BV encouraged joining the ARRL and using their resources.

Field Day will be at the Fairgrounds this year; a lot of member participation will be needed to accomplish what needs to be done.

The drawing was held; the winner is \$20 richer.

A motion was made to adjourn. Seconded and carried. Meeting adjourned at 8:57 PM

There were 31 members and guests in attendance.

Minutes by Rich N7NCN

#### **CCARC MEMBERSHIP**

Here is the scoop on Membership ("...to conduct the business of the CC-ARC and operation of the repeater.") from Article IX of the CC-ARC By-Laws:

- Membership dues for the CC-ARC are \$20.00/ year, payable by March 31<sup>st</sup>.
- One paid membership (one vote) shall cover family members living under one roof.
- Additional licensed family members that wish to become a voting member may do so by making an additional 50% regular dues payment annually (=\$10.00).
- Students & Active Duty Armed Forces personnel will receive honorary membership with no dues required.
- Members that join after March 31<sup>st</sup> will pay prorate based on the quarter they join (2<sup>nd</sup> Quarter = \$15.00, 3<sup>rd</sup> Quarter = \$10.00, 4<sup>th</sup> Quarter = \$5.00).
- Members in arrears shall be kept on the CC-ARC rolls for the remainder of the year but shall have no voting rights nor receive the CCARC-QTC after March 31<sup>st</sup>. If not paid by year's end, they will be moved to the inactive list.

David R. McCoy, KE7JEJ --- . -----CC-ARC Treasurer

# **COMING EVENTS**

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**April 12th** Yakima Hamfest Yakima Amateur Radio Club (W7AQ) http://www.w7aq.org/ Talk-In: 146.660 (PL 123.0)

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**April 5-6** Communications Academy 2008 See ARES QTC pages for details

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May 10 17th Annual Hamfest Stanwood Camano ARC http://www.scarcwa.org Talk-In: 145.19- (PL 127.3) Lyman Hill repeater KG7HQ

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# April 1, 2008 - ARES Training

The Amateur Radio Emergency Services (ARES) group will be having its monthly training on Wednesday, April 1, 2008 (No fooling!) at the Clallam County Emergency Operations Center in the basement of the County Courthouse on 4<sup>th</sup> St. in Port Angeles at 7 pm *sharp*.

**Dave Hull, KD7TFP**, an ARES member and a member of the Clallam County Search & Rescue for over 5 years, will be presenting **an overview of disaster damage assessment**. The approach will be based on the Virginia Department of Emergency Management's damage assessment process, which is taken from FEMA's requirements. There will be a lot of example pictures to establish how damage categories are evaluated.

He will cover Rapid Needs Assessment (RNA) in the most detail, with an overview of Initial Damage Assessment (IDA) and Joint Preliminary Damage Assessment (PDA). RNA's cover the critical needs within the first 24 hours.

He will also focus on standard terminology and standard forms to assure a reliable and consistent assessment process. Some of the forms & handouts will be distributed at the training and he will provide them in electronic format to ARES for incorporation into the web page. Other things on his agenda include safety issues, tools, processes, and teams.

Dave has been with the Sheriff's Department Emergency Management for about a year. He got his general ticket in 1962 (as K3NUE) and moved here in 2000 from Sacramento California, where he was the Chief Engineer at McClellan AFB until they closed it. He has a BSEE, an MS in Anthropology and an MBA. He is also an EMT, a SCUBA Diver and rides a motorcycle (a Honda Shadow 1100).

All interested radio operators and ARES members are encouraged to attend this interesting presentation.

(submitted by Janet Parris, KA7JEP)

#### Communications Academy 2008

Communications Academy 2008 is the 10th annual Academy. It will be April 5 and 6 at South Seattle Community College.

The Communications Academy is open to anyone with an interest in emergency communications, volunteer or professional. The presentations are designed to promote the development of knowledgeable, skilled emergency communicators who will support their local communities during a disaster or emergency response.

The Saturday 2008 keynote speaker is Rich

Tokarzewski, King County Emergency Management Coordinator. Topic: Cultural and langauge barriers in teaching the Incident Command System.



The Saturday 2008 lunch speaker is Charles Simonyi, ham radio operator and astronaut on the International Space Station.

The Sunday 2008 keynote speaker is Dennis Dura, K2DCD, ARRL Emergency Preparedness and Response Manager .

More specific information and a list of classes offered can





be found on their website. www. commacademy.org

Dan Abbott, N7DWA EC Clallam County

Pictures from http://www.commacademy.org/

# Clallam County Amateur Radio Emergency Service (CCARES)

The Clallam County ARES is organized in two levels; as an affiliate of ARRL/ARES and as the recognized RACES organization by the Clallam County Division of Emergency Management. Membership in CCARES is open to all licensed Amateur Radio Operators that are residents of Clallam County, who first register with ARRL/ ARES through the Emergency Coordinator. They are not required to attend training meetings and function as a second response unit in emergencies.

CCARES members in good standing may register in the RACES program with the Clallam County Division of Emergency Management (CCEM) and serve as a primary responder during emergencies. RACES members are the core of the organization and are expected to attend training meetings and participate in drills and other events.

#### Clallam County ARES/RACES

Clallam County ARES/RACES is actively seeking new members and would like you to consider joining. This is a chance to prepare to be part of a solution during an emergency.

January and February meetings are being used to re-register members under a new ID system with the County Emergency Management office.

All RACES members will be required to pass the FEMA/NIMS training IS-100 and IS-700. These courses are free and have been mandated by Homeland Security. They are available on-line at htp://training.fema.gov/EMIWeb/is/.

Dan Abbott, N7DWA, EC Clallam County

## Electronic Fundamentals (Unit-2) Alternating Current

Thomas Edison built his hopes for mass distribution of electric power on the DC generator, (Dynamo). Early on, he realized its shortcomings and he hired the Serbo-Croat engineer and inventor, Nikola Tesla, to improve the efficiency of his Dynamo. Tesla had already patented alternating current equipment in Europe and he tried to convince Edison to switch to AC, demonstrating its efficiency by powering a whole community with an AC distribution system. Edison wasn't having any of it and the two got into a snit over the issue, going so far as to electrocute cats in an effort to show which was the more humane method of execution. Tesla ended by quitting Edison to work for George Westinghouse and Edison lost control of his enterprise to General Electric. Both G.E. and Westinghouse went into the AC distribution business and, with a few exceptions, the whole world adopted AC as the preferred method of powering its factories and households.

In its simplest form, the AC generator is a slightly modified version of Edison's Dynamo. Substitute continuous "slip rings" for the commutator segments in the DC generator and you get alternating current.

A plot of generator output vs. time produces a **sine wave**. In trigonometric terms the **sine (sin)** of an angle **(a)**, in a **right triangle**, is the relationship between the **side oppo-site** the angle and the longest side of the triangle, called the **hypotenuse**.





Now, think of a circle representing the rotating armature of an AC generator. The radius of the circle is the hypotenuse of a right triangle with one point starting at the center of the circle. As the armature rotates, the angle at the center and the length of the side opposite the angle are constantly changing. The hypotenuse, being the radius of the circle, is constant. Let's give it a value of 1 for convenience. You can see from the diagram that at 0° rotation, there is no dimension to the side opposite so the sine of the angle is:  $\sin a = 0/1$ ,  $\sin a = 0$ . There is no voltage output from the generator. As the armature rotates, the side opposite gets longer and longer until it reaches maximum length at 90°. At this point the side opposite and the hypotenuse are the same length so  $\sin a = 1/1$ ,  $\sin a = 1$  and we have peak output from the generator. Notice that for all angles between 0° and 90° the side opposite is less than 1, therefore the sine of the angle and the output voltage are less than peak value. As the armature continues to rotate, the sine of the angle, and the output voltage track exactly and we produce a sine-wave output.

The circumference of a circle can be expressed in degrees of rotation or in radians. (360° of rotation or 2p radians), so you can expect to find AC expressed in either of the two systems of measurement. There are three ways of measuring AC voltage. The first is the **peak-to-peak** voltage, measured from the 90° to the 270° points. The second is **peak** voltage,

measured at the 90° point. The third is called **Root means** 

**square (RMS)** voltage. This is the most useful of the three as it represents the average power available in the waveform. It is obtained where the angle of rotation is exactly 45°f orming an **isos-celes triangle.** At this point the sides opposite and adjacent to the

angle are equal in length. For convenience, we'll make them each "1". For this kind of triangle, the square of the hypotenuse is equal to the sum of the squares of the sides  $c^2 = a^2 + b^2$ ,  $c = \ddot{O}(a^2 + b^2)$ ,  $c = \ddot{O}(1^2 + 1^2)$ ,

 $C = \ddot{O}2$ , c = 1.414 This number is worth remembering. In many applications, you'll find AC called out in terms of RMS voltage. To calculate peak voltage, simply multiply the RMS voltage by 1.414 Use the reciprocal, .707, to get the RMS value from the peak voltage,

There are many ways to generate alternating current but all AC calculations are based on de-

grees of rotation. One complete, 360°, turn of the armature is called one **cycle** and the number of cycles per second is called **frequency**. In the United States, all commercial generators, regardless of how they are powered, rotate at the rate of 3600 rpm. The frequency of alternating current in the transmission

lines everywhere in the country is 3600 cycles per minute or 3600/60 = 60 cycles per second (**60 Hz**). Just to be different, the Europeans and much of Asia use a rotation rate of 3000 rpm for their generators. This means the frequency of their AC systems is 3000/60 = 50 Hz.

Tesla wanted to eliminate wires altogether and light cities using RF radiation. He invented the fluorescent light and lit a bank of them with an RF transmitter 20 miles distant. Imagine living and working inside the equivalent of a microwave oven! Not a good idea! He was right about one thing though. Transmitting DC power over long distances is not practical. The more current supplied, the larger the wires needed to carry it. Remember Ohm's Law?

Watt's law, on the other hand, gives us a way out. P = I E says that for any given power,

voltage and current are interchangeable. Suppose we want to deliver 100 watts to a load. We could use 10 volts at 10 amps to get 100 watts or we could use 100 volts at 1 amp. We could even use 1000 volts at a tenth of an amp. Any combination of voltage and current, whose product yields 100 watts would do. All we need to make the transformation is -- what else? --a

#### transformer!

Transformers, like every electronic component, come in different sizes and configurations but they have some basic elements in common. Most contain a core of magnetically permeable material, such as iron, to concentrate magnetic fields, and windings of copper or aluminum wire are wrapped around the core. In general, transformers are used to step up or step down voltages; to isolate parts of a circuit from each other, or to match one circuit to another. Regardless of usage, the input winding is always labeled the *primary* and the output as the *secondary*. For now, let's limit our discussion to the class of transformers called **power transformers**.

In the national "grid" of power distribution, transformers are used to step a generator out-







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put from a few hundred volts to several thousand volts for long distance transmission via relatively small wires. At its destination another transformer steps the voltage down to the nominal 115V we rely on to power our ham equipment. Now this brings up an interesting point. Due to the long distances involved and the constantly changing load, the voltage you can expect to get from that convenient wall outlet may vary from a low of 90V to as much as 135V. It wouldn't do for things like electric motors or clocks to change speed every time we flipped a light switch or the bread popped out of the toaster. Because AC motors operate on the principle of magnetic induction, they track the **frequency** of the supplied voltage. That's why AC motors designed for use in the United States produce 3600 rpm or multiples of 3600 rpm regardless of the applied voltage and European motors rotate at a speed of 3000 rpm.

So far, we've only seen the simplest form of AC generation, **single phase** power. For transmission on the National power grid, **three phase** generators are used. In this type of generator there are three sets of windings on the armature, spaced 120° apart.

As the armature rotates from 0°, the first winding begins to produce an output voltage. At 120° rotation, the second winding begins to produce an output and at 270° the third winding starts. The output of the first winding is considered to be **Phase 1**, (F1), the output of the second winding, **Phase 2**, (F2), and the third, **phase 3** (F3).

There are two ways to connect a three-phase transformer, Wye (Y), and Delta (D). Transformers may have all Wye, all Delta, or combinations of Wye and Delta windings,

For a delta connected transformer, the voltage across each of the windings will be the same but for a Wye connected transformer, the voltage across individual windings will be the same but, if any two windings are connected in series to obtain a higher output, the sum of the voltages will not be twice that of a single winding because of the phase differences in their respective outputs. Instead, it will be equal to the **square root of 3** or **1.73** 

times the voltage across an individual winding.

A typical overland distribution system works like this. 3 Phase power from a generator is transformed upward to 2000 -- 34000 volts for transmission, depending on how far it has to travel. When it arrives at a point

near it's destination, it is transformed down and broken into three single phase lines for regional distribution. These are much lower in voltage, usually from 2400 to

4200 volts. From there, neighborhood power pole transformers reduce the voltage further, to the 120/240 volts we've all come to know and love. This is distributed about the household in a manner calculated to equalize the load somewhat.

In this unit, we've seen how AC power is generated and transmitted over long distances using transformers to exchange voltage and current. We've also demonstrated AC voltage measurements and defined frequency. In the next unit we'll discuss resistance.

Terms to remember Cycle Frequency

One complete wave or 360° of AC Cycles per second (Hz)







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Voltage at 90° or 1.414 X RMS (P) Total of voltages at 90° and 270° (P/P) Time relationship between events (f) .707 X Peak (RMS) AC voltage vs. time

Paul Honore' W6IAM

Date: Sun, 9 Mar 2008 14:40:42 -0700 (PDT)

Subject: Fwd: World Clock/ amazing...

To: ccarcqtc@yahoo.com

= = = Original message = = =

Never have seen this. CHECK IT OUT.. No matter when you open it, it gives you PRECISE stat's.

This will blow your mind!

http://www.poodwaddle.com/worldclock.swf

Nita

**Sent:** Saturday, February 16, 2008 3:52 PM **Subject:** RE: Donation

Dear Paul,

Thank you to your and the club members for your interest in supporting the ARRL Foundation scholarship program. You may make your check payable to the ARRL Foundation and note on the check that it is designated for the General Scholarship Fund. You may mail the check to the ARRL Foundatio at 225 Main Street, Newington CT 06109.

Thank you again.

73, Mary K1MMH

Mary Hobart Secretary ARRL Foundation

# Thursday Night Club Net

Congratulations to the following hams who checked into the Net every week during the month of February:

N7BV Chuck KE7DRT Nita W6IAM Paul KE7JEJ David K7NIA John W7RJW Becky KA7CSZ Marsha W7DTG Theron AC7IY Mary WA7LDM Jim KE7RFO John KD7TFK AI

John, K7NIA Net Control Coordinator

# FOR SALE OR TRADE

I am looking for work on weekends and after school (2:30) to make money to pay for my Drivers Ed. I can be reached at (360)452-6614 or ke7lka@yahoo.com Thanks, Jody

2m/440 dual band J-pole antenna. Excellent antenna and price \$20. Similar to http:// arrow-antenna.com/j-pole.html Made by KN7R. Proceeds to ARES. Chuck, N7BV or Burt, KN7R

M F J Deluxe Versa Tuner II MFJ-949E Used very little. Price \$100.00 Ten Tec Model 228 Antenna Tuner / SWR Bridge Price \$55.00 Tom Newcomb KE7XX Ph: 452 8228

ICOM IC-746 transceiver with power supply and speaker

- ▶ includes CT-17 interface
- ►MFJ-259B Antenna analyzer
- ► MFJ-986 Differential tuner

► Heil microphone and cable for ICOM radio I would like to sell it complete, as a bundle, asking \$1450. The radio has been boxed since 2003 due to our move. All are in great shape with no issues. Scott, NF7Y, 683-87

### FROM OUR TREASURER:

As of February 29<sup>th</sup>, 2008: First Federal Savings & Loan of Port Angeles Balance is:\$3,148.46 <u>Outstanding Cheques: - 50.00</u> Current Book Balance: \$3,098.46 CD at WestSound Bank (6-month): \$1,000.00 <u>CD at WestSound Bank (18-Month):</u> 3,000.00 Total Cash Assets: <u>\$7,098.46</u> Of the 117 listed members, 70 have paid their dues for 2008 (27 in late 2007, 43 in 2008).

David R. McCoy, KE7JEJ -.- . ---.... CC-ARC Treasurer

# March Birthdays:

Abbott, Dan	N7DWA	Mar-09 🍳
✤ Klaus, Jeffery	KC9HNL	Mar-14
Falls, Jerry	KD7TFL	Mar-23
Newcomb, Tom	KE7XX	Mar-24 휞
Pearson, Robert	W6FEH	Mar-28 🔍
🕆 YL Birthdays		
🕈 Fisk, Diane (Al, KD	07TFK)	Mar-18

Happy Birthday!

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# **YL LUNCHEON**

14 March Gordy's Pasta and Pizza 1123 E. 1st Street, PA Time: 11:30 a.m.

Find us on the web at www.olyham.com Check it out. Lots of information about ham radio in Clallam County!

#### 2008 - CCARC Ladies Luncheon Schedule Reservations are made for 11:30 – 2<sup>nd</sup> Friday of each month

March – Gordy's Pasta and Pizza – 1123 E. 1<sup>st</sup> – Port Angeles April – Oak Table – 292 W. Bell – Sequim May – Downriggers – 115 E. Railroad Ave. – Port Angeles June – Danny's - JC Penny Plaza – Next to Police Sta. – Sequim July – Michaels – 117 – 1<sup>st</sup> St. – Port Angeles August – Tarcisios – 609 W. Washington – Sequim September – Sergios – 205 E. 8<sup>th</sup> – Port Angeles October – Fortune Star – 145 E.Washington - Sequim November – Chestnut Cottage – 929 E. Front – Port Angeles December – Paradise – 703 S. Sequim Ave. - Sequim

Description	Time/Date	Location	Contact
Clallam County ARES/RACES meeting	7 pm, first Tue of every month	Clallam County Courthouse EOC, 223 E. 4 <sup>th</sup> St., PA	Chuck Jones N7BV 360-452-4672
Clallam County Amateur Radio Club general meeting	7 pm, second Wed of every month	Port Angeles Fire Station 5 <sup>th</sup> & Laurel Streets, PA	Tom Newcomb KE7XX 360-452-8228
Clallam County Amateur Radio Club social breakfast	8 am, first Sat of every month	Joshua's Restaurant Hwy. 101 & Del Guzzi Dr.	Tom Newcomb KE7XX 360-452-8228
Clallam Country Amateur Radio Club YL social lunch	11:45 am 2d Fri of every month	Rotates - announced on Thursday night Net	

# **CLUB OFFICERS For 2008**

President: Chuck Jones N7BV	360-452-4672	n7bv@yahoo.com
Vice President: Bob Sampson K6MBY	360-582-9116	k6mby@olypen.com
Secretary: Rich Golding N7NCN	360-683-9309	n7ncn@myfam.com
Treasurer: David McCoy, KE7JEJ	360-461-5470	mccoy.d.r@olypen.com
Chairman of the Board: Tom Newcom	b 360-452-8228	ke7xx@arrl.net
Board Member: Bob Kennedy AC7RK	360-457-6177	ark@tenforward.com
Board Member: Bill Carter W7WEC	360-681-4375	bcarter@olypen.com