



CLALLAM COUNTY  
AMATEUR RADIO  
CLUB

QTC  
MAY 19

### **BV RAMBLES:**

I thank everyone who submitted items for this newsletter; Sheldon, Rosemary, and Doug,.

The exam session yesterday May 4th went smoothly. We thank all the VE's who could help out with the session: Bill W6JEQ, Bob KF7JQV, Bruce KD7WMB, Chuck WA7EBH, Cori KF7VZZ, Dennis AD7TV, Jim K7QCK, John W6SU, Paula K7PAX, Ray KG7WNB, Linda KG7WMS and Bill P K7WWP . Thank you one and all.

There is so much changing in the world of ham radio it is hard to keep up. Much of the changes are based on the newer modes brought to us by K1JT FT8 and now JT4. Eventually these modes will be expanded for every day use so they benefit all, by this I mean being able to pass traffic, making them the newest adaptation of them useful for emergency radio. This will then give Emcom the advantages of these modes.

There was an article in my last NCJ (National Contest Journal) which I thought was of specific interest to Dennis. Dennis devoured the entire issue noting the magazine was full of helpful articles for station building. I had not given much thought along those lines, but when I did I realized there is not much to contesting to fill a readership, except for station improvements. Yesterday at the exam session I brought my latest NCJ in to show Dennis an article on winding coaxial balun and he tried to make off with it!!

We have kicked around several ideas for the program at this months meeting; 1) a world wide HF Net and 2) a replacement for the G5RV with much better SWR dips. Nothing was decided.

I hope you are enjoying these great weather days. Get out there and put up some antennas, make some contacts.

73, Chuck N7BV

## Get Your License Here!

**May 4 EXAM Session**

**29 Candidates  
34 exams given  
Will report further when paper  
work done.**

**Chuck Jones N7BV  
ARRL VE-L**

**4/08/19**

**General Meeting Program**

**TBD**

### CCARC QTC Newsletter

**Just a little background on the QTC.**

We use ccarcqtcc@yahoo.com as a repository for information for the newsletter. So if you have something for the QTC, please send it to the yahoo address. Do not sent it to one of the editors as they will just have to turn around and resend it to the yahoo address.

Please make sure the article or information is complete. As we rotate editing the newsletter you cannot be sure which editor will be piecing the newsletter together.

Please remove as much formatting from within whatever program you are using if you know how, before sending it to ccarcqtcc. We do not edit, except to change fonts to a standard non-serif font (Arial which is easier to read than Times Roman). We will run a spell checker.

When first conceived the editors were given free license, it still is that way. It was understood they would endeavor to include everything submitted, within reason. For instance, off color jokes etc. are not going to be printed. Thanks,

**Have an idea for a club program?  
Pass them along to the members  
of the program committee.**

**Thanks.**

We need articles and input for the QTC newsletter. This is your newsletter.

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

Did you put up a new antenna, buy a new radio? Tell us about it.

Did you try a new mode again tell us about it.

The more you submit the less blank space we will have!

### 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.

From: billp@alaska.net <billp@alaska.net>  
Sent: Sunday, May 5, 2019 9:05 AM  
To: QTC@CCARCWA.groups.io  
Cc: Chuck Jones - N7BV <n7bv@yahoo.com>  
Subject: Field Day 2019

The 2019 Field Day Committee met Wednesday April 24, 2019, and the following items need addressing:

- We need someone to check out the club radios, verify operation on 10/15/20 SSB, 40 meters CW and 20m Digital modes.
  
- We decided that 20m will be dedicated to digital traffic during the Saturday kids activities (1100 - 1630). After that, it's available for SSB or digital.
  
- We would like some operators to volunteer to make voice and PSK31 QSOs with the Scouts, from their home shacks. The Scouts need a 10-minute QSO, and on Field Day that won't happen with contesters!
  
- We will be needing mentors to help the Scouts with those QSOs and with meeting some of their other merit badge requirements. Probably a couple of hours on Saturday.
  
- Chris Icide (WY7W) will be using his RV as the 2m contest "tent", operating on solar. Chris will also use his solar/batteries/inverter to provide power to all the contesting radios for a period of time Saturday, probably in the late afternoon. This will allow us to claim extra "Alternate Power" points per the rules section 7.3.8
  
- Thanks for your help.

Rick - AA0RD

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We are also looking for a ham who will serve during Field Day as a Scouts Merit Badge Counselor so we can help scouts get their radio merit badge. The counselor must be knowledgeable subject matter of the merit badge (in this case radio), and must submit an application to the Scouts to be a counselor. The application requires you watch a one hour video and submit to a background check. The approval process takes 3-4 weeks. We expect that the counselor will only serve during our Field Day event on Saturday. We are expecting maybe half a dozen scouts who will be interested in and motivated to get this merit badge.

Bill – K7WWP

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Sheldon says:

Instead of a sign  
that says 'do not disturb'  
I need one that says  
'already disturbed  
proceed with caution'



Doug <dwelcker@q.com>  
To:ccarcqtc@yahoo.com  
May 5 at 9:44 AM

A friend of mine (Clint Chron W7KEC) wrote this and sent it to me and I found it most interesting.

I contacted Clint and asked him about publishing it our newsletter which he gladly agreed to.

73 Doug

Subject: Failed Electrolytic Capacitors In Computer Equipment

Over the past 50 years, my normal observation of failed electrolytic capacitors has been units losing capacitance as a result of drying out. The hotter the operating temperature, the quicker they dry out. In the early 80s, I put my daughter through college by fixing bad 5 volt power supplies in Super 8 Mitel SX-20 telephone PBXs. There was a 470 uf capacitor in the power supply that would go to less than 200 uf. When that happened, the 5 volt power supply went to about 4.8 volts and there was lots of AC ripple on the 5 volt line. The microprocessor in the PBX did not like the AC ripple.

There has been a new failure mode that started about 15 years ago – I suspect you have read about the issue. The problem came to light about 8 – 10 years ago. The story goes that a Taiwan engineer defected to another company and took the company's secrets on manufacturing electrolytic capacitors. However, the engineer had bad data. The ingredients in his formula were wrong. He went to the new company and they started making capacitors with the ingredients that the engineer provided. The rest is history:

[https://en.wikipedia.org/wiki/Capacitor\\_plague](https://en.wikipedia.org/wiki/Capacitor_plague)

When I was at Schwab, I think that HP replaced several hundred PCs that had the problem. The support vendor replaced the entire motherboard as opposed to replacing a couple of the bad capacitors on each board. I see in the above article that Dell took a \$420M hit on fixing bad PCs.

I have seen the problem a couple of times in the equipment that I have been associated with. I had one customer with a bad PC motherboard. Looking at the motherboard, I could see at least 8 capacitors that were bulging. I replaced them and that fixed the problem. About

4 years ago, my Centurylink DSL modem started having problems with Internet connectivity. The problem got worse and worse. I opened up the case and saw one bulging capacitor. I replaced it and the modem was working good again.

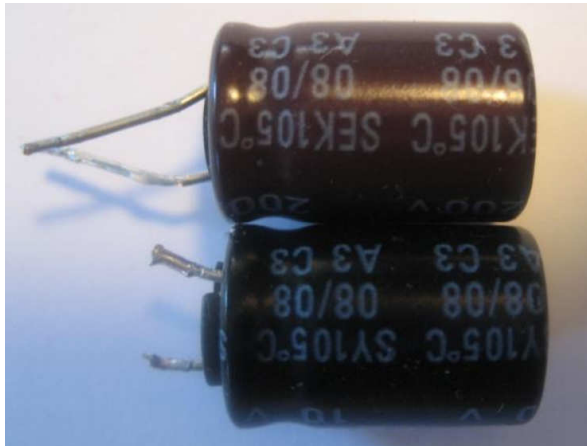
My Klipsch subwoofer (about 8 years old) recently stopped working. There are loud thumps from time to time and lots of hum. I pulled the amp board and saw one 470 uf 400 volt capacitor that was slightly bulging on top. I have a replacement capacitor – I hope that fixes the problem.

I have a cheap 5 port Ethernet switch. It stopped working. It uses a wall type switching power supply. It is supposed to provide up to 2 amps of current at 5 VDC. With the switch attached (200 ma load), the voltage from the power supply was 4.5 volts. I put a good 5 volt power supply on the switch and it worked fine. I opened up the bad power supply. There was a slightly bulging 1000 uf capacitor that measured 500 uf. That capacitor was probably causing the problem with the voltage being 4.5 volts.

Here is a top view picture of the slightly bulging capacitor (one of the left) and a good one:



Here is a side view of the same capacitors:



The capacitor on the bottom is pushing out the bottom plug.

The referenced article states that the bulging capacitor problem should have ended around 2007, but it appears that it is still out there.

73 Clint

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Editors Note:

I have repaired several 19" Dell monitors and one Viewsonic 20" monitor by replacing swollen capacitors.

There are several YouTube videos and sites telling how to do this.

Chuck N7BV

### The ongoing Saga at QTH KI7MZH

My latest project was to put up a Diamond X50 2 meter antenna that I received from a SK's wife a couple of months ago. I had a donated J-pole 2 meter put up hastily by a novice ham when I first got my license 2 years ago.

I moved the new antenna up 5' higher with the help of my assistant, Jeannine. I am not a fan of getting up on ladders and was glad to have a spotter and helper for this project. I had to pre-drill a new bracket to hang on the eve of the roof. Jeannine dug a hole for the post to hang the 10' mast on. It took us 5 hours and several ups and downs on the ladder.

Seems like people can hear me better, so am glad to get the antenna up and running. I have the J-pole if someone is interested in it. I'll bring it to Club meeting.

Rosemary Day KI7MZH





## 7QP QSO

On Saturday I participated in the 7 QP contest: AZ, ID, MT, NV, OR, UT, WA, WY on 10-160 meters. Ran from 6 a.m. to midnight. This is the first time I participated using a Yaesu FT-950 that I purchased this year. Borrowed a Heil headset from N7BV and got a free foot pedal from David M. that he was advertising. Both worked great.

The bands were very QRN and had trouble hearing because of the noise. I usually can receive from the East Coast and South, but heard nothing from them. I spent most of the time searching and pouncing, seems much harder to contest that way. I heard nothing on 10, 15 meters. Was scratchy on 20 and 40 meters. I don't have an antenna for 80-160m. I made about 40 QSO's and worked hard for each one!

Lessons learned:

Make sure your setup is correct. I couldn't correct the section area, so had to manually edit all my contacts or I would have called CQ myself.

YL's do get acknowledged in a pileup.

Do take breaks!

Research headphones for best fit. Ears tend to get sore wearing them for a long period, any suggestions? They work well for hearing through static tho.

Better antenna??

Keep on practicing!!

Rosemary Day KI7MZH

Yamaha \$59.00

### BM-17

MSRP: \$127



----- Original Message -----

From: SpaceWeather.com <[swlist@spaceweather.com](mailto:swlist@spaceweather.com)>

To: <[n7bv@hotmail.com](mailto:n7bv@hotmail.com)>

Date: Thu, 2 May 2019 15:58:07 +0000

Subject: The Mystery of Geomagnetic Jerks

In the late 1970s, researchers realized something strange was happening to Earth's magnetic field.

Space Weather News for May 2, 2019

<http://spaceweather.com>

<https://www.spaceweatheralerts.com>

WHAT ARE GEOMAGNETIC JERKS? In the late 1970s, researchers realized something strange was happening to Earth's magnetic field. From time to time, without any gusts of solar wind to cause it, global magnetic fields would "jerk," suddenly accelerating in one direction or another. A big jerk in 2014/2015 prompted officials to update the World Magnetic Model years ahead of schedule. A new model of Earth's interior, just published in Nature Geoscience, may explain this phenomenon, possibly solving a 40 year mystery. Get the full story on today's edition of Spaceweather.com (<http://spaceweather.com>) .

NEW: Sign up for Space Weather Alerts (<https://www.spaceweatheralerts.com>) and get an instant text message when geomagnetic storms are underway.

<http://spaceweatheralerts.com>

Above: Solar storms happen even during solar minimum. Catch the next one with an instant text message from Spaceweatheralerts.com (<http://www.spaceweatheralerts.com>) .

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\*\* (<http://www.facebook.com/sharer/sharer.php?u=https%3A%2F%2Fmailchi.mp%2Fspaceweather%2Fthe-mystery-of-geomagnetic-jerks>)

\*\* Share (<http://www.facebook.com/sharer/sharer.php?u=https%3A%2F%2Fmailchi.mp%2Fspaceweather%2Fthe-mystery-of-geomagnetic-jerks>)

\*\* (<http://twitter.com/intent/tweet?text=The+Mystery+of+Geomagnetic+Jerks:https%3A%2F%2Fmailchi.mp%2Fspaceweather%2Fthe-mystery-of-geomagnetic-jerks>)

\*\* Tweet (<http://twitter.com/intent/tweet?text=The+Mystery+of+Geomagnetic+Jerks:https%3A%2F%2Fmailchi.mp%2Fspaceweather%2Fthe-mystery-of-geomagnetic-jerks>)

\*\* (<http://us11.forward-to-friend.com/forward?u=0c5fce34d5ca05f64a13d085d&id=c794232e0b&e=5b70eefb6e>)

\*\* Forward (<http://us11.forward-to-friend.com/forward?u=0c5fce34d5ca05f64a13d085d&id=c794232e0b&e=5b70eefb6e>)

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You might find these articles from AmateurRadio.com of interest.

The last few years have seen a resurgence of interest in the **end fed half-wave** wire **EFHW antenna**. A half-wave at the lowest band of interest will also work well on all harmonically-related bands.

[https://www.amateurradio.com/my-end-fed-half-wave-efhw/?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed%3A+amateurradiocom+%28AmateurRadio.com%29](https://www.amateurradio.com/my-end-fed-half-wave-efhw/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+amateurradiocom+%28AmateurRadio.com%29)

### **FCC looking for comments on enhanced Tech privileges**

[https://www.amateurradio.com/amateur-radio-weekly-issue-233/?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed%3A+amateurradiocom+%28AmateurRadio.com%29](https://www.amateurradio.com/amateur-radio-weekly-issue-233/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+amateurradiocom+%28AmateurRadio.com%29)

### **The SZ-70 cross needed SWR movement.**

[https://www.amateurradio.com/the-sz-70-cross-needed-swr-movement/?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed%3A+amateurradiocom+%28AmateurRadio.com%29](https://www.amateurradio.com/the-sz-70-cross-needed-swr-movement/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+amateurradiocom+%28AmateurRadio.com%29)

Perhaps Rosemary's poor propagation was the result of:

**PACIFIC RADIO BROWNOUT:** Returning sunspot AR2740 (see below) erupted during the late hours of May 4th, producing a **C2-class** solar flare at 22:43 UT. Extreme ultraviolet radiation briefly ionized the top of Earth's dayside atmosphere, producing a brownout of shortwave radio signals over the Pacific Ocean. Frequencies affected were mainly below 10 MHz. View the [brownout map](#) for more information. **Instant Solar Flare Alerts**

### CCARC Ham Meeting 4-10-19

Meeting opened with Pledge of Allegiance at 7:00 by President Mark E.

Minutes approved as published in the QTC.

Treasurer: \$7852 in checking, \$3036 in savings, \$1000+ CD

121 members, 52 paid up members. Please send in your dues of \$20 for the year.

President: At Board Meeting discussed purchasing a waterproof 10×14 canvas tent for Field Day, was approved. Want to buy a second tent for Field Day. Discussion, Motion to approve a second tent with tarp for Field Day. Approved.

Field Day: Will set up stations for the Boy Scouts for badge. Scavenger hunt. Jim Beck to do presentation. Working on Banner for City of PA to hang the week before. Need graphics. Anyone able to help, please contact Rick DeWitt. Would like one with changeable dates. \$200 maximum to purchase banner. Motion Approved. Propane Heaters for tents, Chuck and Ray to lend to Club for FD.

Need to replace platforms for outriggers on tower. George has bid for 3-1/4" steel plates with handles. 2'X2' with wings on side. Cost \$270.00. Motion and approved. These will replace wood ones that are failing. Will postpone till next year purchasing propane heaters for FD. Press

with photos online being prepared by Jeannine. Next FD meeting Wednesday, April 24<sup>th</sup> at 7p.m. place TBA.

Next Ham Class is full. Need 2 more instructors.

Repeater: Doug W. and Chuck S. are testing line from Striped Peak to Gunderson.

Program: Dennis had presentation on Dipoles and Baluns. In a perfect world a dipole is a balanced antenna. Trees and buildings and other objects make this balance unbalanced. Balun purpose to balance to unbalanced. Impedance 70 to 50 ohms.

Unun: unbalanced to unbalanced, reduce common mode currents.

Differential vs common mode current-unbalanced on outside skin of shield. Get RF distortion which causes RFI generation. How to choke off? Use current balun, place close to feed point to choke off external RF. Choke Ununs come in different sizes.

Balun: 4:1 Website with lots of info on baluns: **TRX Bench**.

Types of Antenna: Control Feeder Radiation Dipole, Terminal Folded Dipole: 3 pole installation,

Broadband Butterfly Terminator Dipole: 16:1 Balun with 600 Ohm Resistor, House roof terminator, off center fed dipole 80-6m. Need tuner for 4:1 balun. 1:1 current balun safe to use at feed point. Single band 1:1 dipole. 4:1 used for Multi-bands and broadband antennas.

Articles found in ARRL- Roy Lewallen, W7EL, "**Baluns, and how they do and what they do**".

31 members present.

Meeting adjourned with break at 8:45 p.m.

Respectfully submitted,



The **PNW DX Convention** has been held every summer since 1955 with the sponsorship rotating between the major DX clubs of the Pacific Northwest. The 64th Convention is hosted by the [Western Washington DX Club](#), the largest and oldest of the clubs.

Together, these organizations have upheld the rich traditions of amateur radio and the pursuit of DX through five solar cycles. Over the decades, we have enjoyed wonderful friendships and the very special international camaraderie that ham radio fosters in the Pacific Northwest and around the world.

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**Northwest DX and Contest Clubs**

[Spokane DX Association](#) | [Idaho DX Association](#) | [Western Washington DX Club](#)  
[Willamette Valley DX Club](#) | [Central Oregon DX Club](#) | [Orca DX and Contest Club](#)  
[British Columbia DX Club](#)

*Congratulations and thank you to the Orca DX and Contest Club for hosting a great 2018 convention on the banks of the Fraser River in lovely British Columbia!*

See: <http://pacificnwdxconvention.com/>

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**Some of the Presentations:**

Dr. Joe Taylor, K1JT  
 "Beyond WSJT-X 2.0"

Dr. Tamitha Skov, WX6SWW  
 "Space Weather Woman"

Ed Muns, W0YK  
 "Contesting Beyond CW, SSB, RTTY "

Mike Mertel, K7IR  
 "The SteppIR (Antenna) Story"

Dinner Banquet and  
Special Guest Speaker  
 Ward Silver, N0AX

Ed Muns, W0YK  
 "Contesting Beyond CW, SSB, RTTY "

### **Treasurer Report**

Respectfully, Joe Edwards KI7RBS  
CCARC Treasurer

### **FOR SALE or TRADE**

**TS-940s transceiver with built-in tuner. \$300.**

**This unit works. It has three minor issues that does not effect operation.**

**Also have two nice, home brew, 800W "T" tuners. One is link coupled for twin-lead use. These are \$30 each.**

**Contact Dennis Tilton AD7TV 360-452-1217**



### **CCARC Standing Committees**

**Field Day Co-Chairs:** Al Fisk KD7TFK, Sheldon Koehler N7XEI

**Health and Welfare:** Rosemary Day KI7MZH

**Membership Chair:** Joe Edwards KI7RBS

**Net Coordinator:** Cori Rice KF7VZZ

**Public Relations:** Jeannine C Tyler

**Publications (Newsletter):** Chuck Jones N7BV,

**Technical Committee Coordinator:** Doug Welcker, WB4KGY, Bob Sampson K6MBY, Bill Peterson K7WWP, Merrill Terpstra KA7FAM

**VE Education and Training:** Chuck Jones N7BV

**Web Site Administrator:** Bill Peterson K7WWP

### **CCARC Special Committees**

**Roster:** Joe Edwards KI7RBS

**NEXT YL Luncheon**

**May 10, 2019  
Downriggers,  
Port Angeles**

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

**2019 - CCARC Ladies Luncheon Schedule**

Reservations are made for 11:30 - 2nd Friday of each month

- May - Downriggers - 115 E. Railroad Ave. - Port Angeles
- June - Black Bear Diner - 1471 E. Washington - Sequim
- July - Gordy's Pasta and Pizza - 1123 E. First St. - Port Angeles
- August - Mariners - 609 W. Washington - Sequim
- September - Cafe Garden - 1506 East 1st St - Port Angeles
- October - Paradise - 703 No. Sequim Ave - Sequim
- November - Chestnut Cottage - 929 E. Front - Port Angeles
- December - Cedars at Dungeness - 1965 Woodcock Rd. - Sequim

Description	Time/Date	Location	Contact
Clallam County ARES/RACES meeting	7 pm, 1st Tue of every month	Clallam County Courthouse EOC, 223 E. 4 <sup>th</sup> St., PA	
Clallam County Amateur Radio Club general meeting	7 pm, 2d Wed of every month	Port Angeles Fire Station 5th and Laurel, PA	Chuck Jones N7BV 360-452-4672
Clallam County Amateur Radio Club social breakfast	8 am, 1st Sat of every month	Bi-Monthly Joshua's Restaurant, PA & Mariner Restaurant, Sequim	Chuck Jones N7BV 360-452-4672
Clallam County Amateur Radio Club YL social lunch	11:45 am 2d Fri of every month	Rotates - announced on Thursday night Net (See QTC Newsletter)	

[CC-ARC Welcomes new member/s:](#)

**CLUB OFFICERS For 2019**

**President:** Mark Ellington K7DWE 360-460-4043 [gossamer765@gmail.com](mailto:gossamer765@gmail.com)  
**Vice President:** Chuck Jones N7BV 360-775-8201 [n7bv@yahoo.com](mailto:n7bv@yahoo.com)  
**Secretary:** Rosemary Day KI7MZH 360-457-6895 [rosemaryday2000@yahoo.com](mailto:rosemaryday2000@yahoo.com)  
**Treasurer:** Joe Edwards KI7RBS 360-808-5282 [ki7rbs@gmail.com](mailto:ki7rbs@gmail.com)  
**Board Chair Person:** Bill Peterson K7WWP 425-678-5753 [billp@alaska.net](mailto:billp@alaska.net)  
**Board Member:** Mike Rice KF7VZZ 360-912-2395 [kf7vzz@gmail.com](mailto:kf7vzz@gmail.com)  
**Board Member:** Jeannine C Tyler (360) 460-4236 [weblairs@olypen.com](mailto:weblairs@olypen.com)