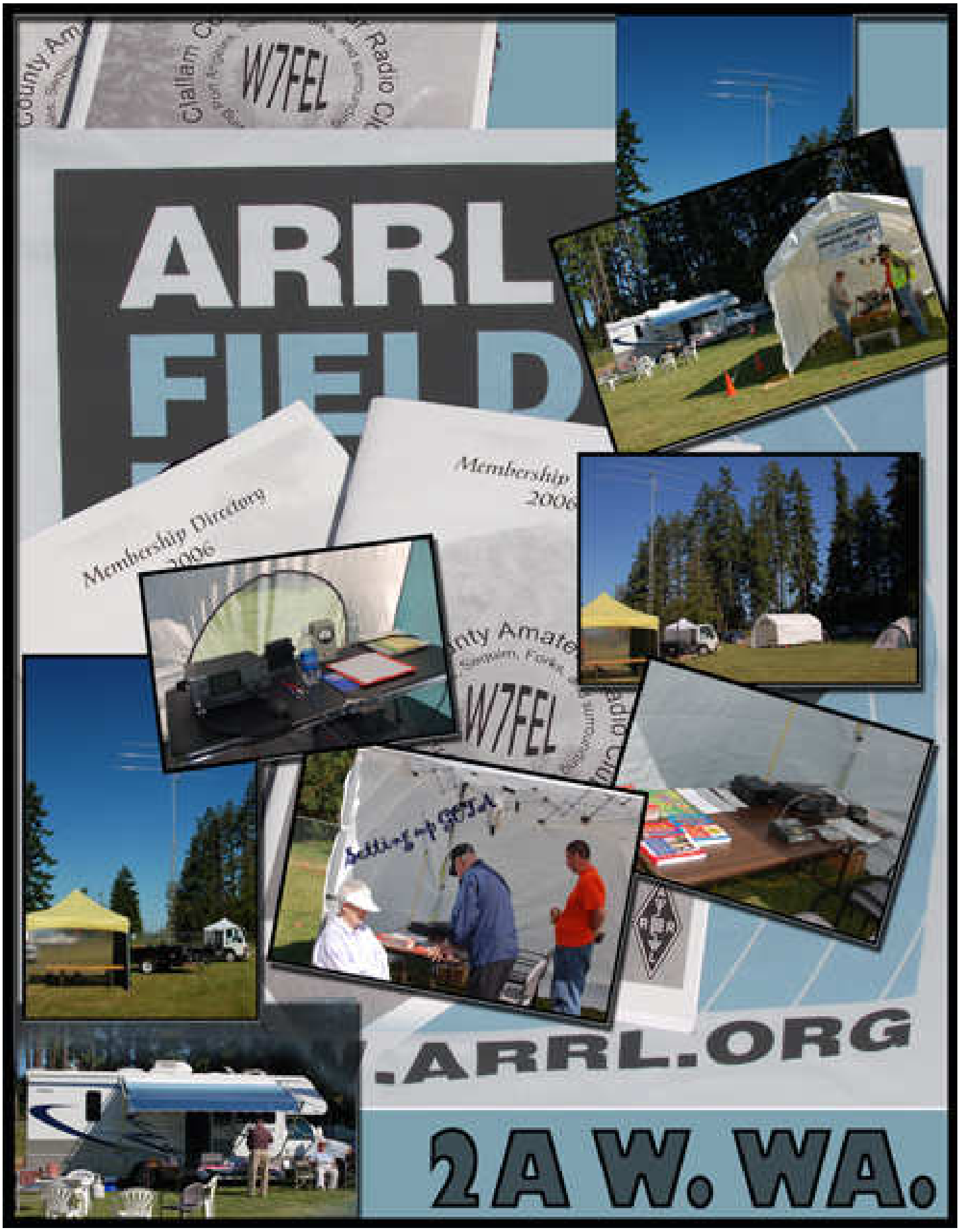
W7FEL
ARRL
FIELD
Membership Directory
2006
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CLALLAM COUNTY AMATEUR RADIO CLUB

QTC

JULY 06

President's Log

As I greet you all in July, I have some comments and a difficult statement to make.

First, something I had never considered regarding birth**days** and birth**dates**. I was reminded of this when a local radio station in Bellevue sent me a Happy Birthday e-mail back in May (I am what they call a "loyal listener"). We do not celebrate our actual birth**day** every year but rather our birth**date**. Our birth**day** only occurs every seven years, more considering leap years. But we can still pretend and enjoy the day.

Field Day is done for another year and again I consider the operation a success. We didn't set any records, but that is, after all, not the point of the event. This year the ARES/RACES group had an exhibit tent prepared and expertly presented by Nita, KE7DRT. Among our first visitors on Saturday was Ed Bruette, N7NVP, ARRL WWA SCM and Ken Dahl, K7TAG, WWA ARES/RACES SEC. On his website of FD pictures from all over WWA, http://n7nvp.spaces.msn.com/photos/personalspace.aspx, Ed declared Nita's tent "Best Welcome Table Seen This Year". We had several other dignitaries drop by including PA Mayor Karen Rogers, who presented us with the city proclamation of Amateur Radio Week. Then she sat down at the GOTA station and made a contact on 15 meters no less! Who said 15 is dead!

I have completed the log review and am now working on the activity report to ARRL. Thanks to all who participated and a special thanks to Ernie, N7INB for the Friday pizza feed and Roger and Priss for the great food service all weekend.

Now for the difficult part.

When annual elections are held at the November general meeting, I will **NOT** seek re-election as your president. This is due to a number of reasons that I choose not to discuss in this forum. It is possible that I will also not be able to attend many monthly meetings for the rest of the year. When I can be there, I will preside for the meeting. Otherwise, Roger, K7RGR, will be given an agenda and has agreed to cover for me. I have enjoyed being the club president for the last 4 years and witnessing membership growth, the renewal of a "newsletter", and a very healthy VE licensing program, which, according to ARRL VE HQ, has one of the highest passing rates in the country.

My personal thanks to all of you for your support over the years. You, the members, have brought this club back. I hope you will continue your support for the next president.

My intention is to be as active in club and VE activities as I can. If asked, I will be glad to offer my input to the Board.

Remember, Amateur Radio is a contact sport.
I hope to talk to you on the air sometime soon.

73, Russ, K7INA

Get Your License Here!

Your club has scheduled another Technician Class for Aug 12, 19 and 26 in the Training Room at Port Angeles Fire Department. The classes will run from 9 AM to 5 PM on the first two days and a review will be conducted on the morning of the third day with tests at 1 PM.

If you know of anyone interested in taking this class please have them contact **Tom Newcomb, KE7XX, at 452-8228.**

We encourage the students to pick up a text book as soon as possible. These books are available from Tom Newcomb at a cost of $24.95.

Clallam County ARES/RACES

Clallam County ARES/RACES is actively looking for new members and would like you to consider joining our emergency communications group.

Our June drill with the Coast Guard was successful. The exercise mirrored a small portion of the Pacific Peril event of May. Bill Carter enjoyed an all expense ride in a CG helicopter to Neah Bay and back.

Training is conducted at each general meeting the first Tuesday of each month. This months the topics will be Message Handling and the ICS system.

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

Chuck Jones, N7BV, EC Clallam County

See www. Hello-Radio.org for information on the new ARRL 2006 public relation and marketing campaign based on the word "HELLO."

New Club Directory

The new club directory is hot off the press. Pick one up at the next Club function.

PROGRAM FOR THE July 12th MEETING

From Clint Hurd, KK7UQ, of Port Townsend will speak on Digital Modes and PSK in particular. We have heard Clint does a great job explaining PSK, so come along and enjoy the presentation.

Thanks: AC7RK N7BV W7WEC

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.

There was once a Coast Guard supervisor that directed one of his ET (Electronic Technician) staff to install a VHF transceiver in the wheelhouse of a buoy tender. The ET was having some difficulty finding a place to mount the microphone bracket but he soon found a place next to the VHF radio that was a bright, shiny, rectangular piece of copper tube. Perfect place for a microphone bracket. Opps, it was the wave guide from the bridge long range radar.

What do you suppose the supervisor's thoughts were when he came to inspect the job? Maybe the supervisor, who we will call Al, will write a short article on what his thoughts were and the outcome of the perplexing situation. Maybe he will also educate us as to why it is NOT a good idea to put screws in wave guide.

Relayed by Bob K6MBY (don't shoot the messenger Al)

Information

The QTC newsletter staff uses the Email address ccarcqtc@yahoo.com and location on Yahoo to store articles and information that you send in. We also use it to send Emails back and forth between us regarding file formats. Thus we have limited the access to this Yahoo address to the three editors of the newsletter in-order to prevent mishaps with information.

However, as this site has a compilation of all the Emails addresses of members, we occasionally have been used to relay breaking news to the group.

Please respond directly to the originator of the Email, sending your response back to ccarcqtc@yahoo.com will not get to the originator of the message.

On another subject, please be aware due to spam fighting by Yahoo it takes four separate transmissions (limited to one per hour) to get the QTC Email out.

Thanks. *Da Staff!*

FOR SALE OR TRADE

Wanted:

The following mid-60's ARRL books, "The Radio Amateur's VHF Manual", "A Course In Radio Fundamentals", "Learning the Radiotelegraph Code", and "The Radio Amateur's Operating Manual".
Contact Bruce Thompson W7DNA at 457-6134 or bgt@olypen.com

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For Sale:

Icom R-72-A general coverage receiver. MFJ-948 "Versa Tuner" antenna tuner. Vibroplex bug.
Contact Vern Melick W7BAI at 457-0049 for details.

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Nye Tuner MB-V-A $400

Contact: Burt KN7R. 457-4049

~ ~ ~ ~ ~ ~ ~ ~

CDE Big TALK Rotor System 2.5sqft wind load
Make offer.
Contact: Nita Lyman 457-5022

~ ~ ~ ~ ~ ~ ~ ~

Your Ad Could Go Here

Please note:

Your ad will run for two months. If your item(s) sells or you want it to run longer, please E-mail the QTC Staff at ccarcqtc@yahoo.com.

Thank you.

Station Grounding Requirements

Perhaps the most confusing and misunderstood subject in radio is proper grounding of a base station. The confusion begins with the premise that there are two kinds of ground to contend with, ***DC (Direct Current and low frequency Alternating Current)*** ground and ***RF (Radio Frequency)*** ground. Both kinds of ground are needed for safe and efficient station operation but the two are frequently in conflict. The reason is simple. At very low frequencies current flows evenly throughout a conductor but as frequency is increased, current flow tends to concentrate more and more toward the conductor surface. At some point in the radio spectrum energy leaves the conductor altogether and launches itself into space. Our station ground has now become an antenna and while it is still a perfectly good ground at 60 Hz, the frequency that powers our refrigerators and washing machines, it become a liability at radio frequencies.

If grounding is so arbitrary, how can we arrive at a solution that satisfies both DC and RF requirements? It isn't easy but it can be done. There are three situations where grounding is important. (1) Short circuit protection, (2) Protection from lightning , and (3) RF grounding. Let's look at them in turn.

(1) Short circuit protection

According to Section 250-23 of the *National Electrical Code*, every building to which electrical power is provided must have an earth ground at the point where power enters the building. This ground is specified as a ½ inch by 8 foot galvanized iron rod driven into the earth **outside** the building at the service entry - meaning a point close to the utility meter and the fuse box. Everything electrical, including telephone service, television sets , computers and the like **must** be grounded at this single point - no exceptions. The issue is personal safety.

The u-shaped receptacle at every electrical outlet in the building is connected by a bare copper wire to this earth ground and the mating u-shaped pin at the end of every modern electrical power cord connects the equipment chassis to ground via a green-colored wire. This ensures that the chassis of every piece of equipment in the building is at the same electrical potential - earth ground. This is important. I was once nearly electrocuted when I leaned against a 440 volt motor that had been mis-wired with the "hot" lead connected to the motor frame.

(2) Protection from lightning

Nothing can protect you or your equipment from a direct lightning strike. Fortunately the odds of a direct strike are about the same as being hit by a stray meteorite. Nevertheless it is prudent - and required - that you take some kind of precaution against static discharge in case of a nearby thunderstorm. Formidable static charges can accumulate on an antenna and can do serious damage to your radio if a safe discharge path to ground is not provided.

Section 800-21 of the *National Electrical Code* deals with the subject of lightning protection for antennas. It specifies a "lightning discharge unit" at the point where an antenna or transmission line enters the building. It also specifies that the ground wire for the device be connected **to the same point as the equipment service ground.** That means the 8-foot rod at the service entrance to the building. Fortunately you are dealing with DC here so the ground wire can be any length and only has to be large enough to handle the static discharge current. A number of useful gas-discharge devices are commercially available for coaxial transmission lines. The problem of protecting ladder lines and wire antennas is a bit more esoteric. A lot of solutions have been proposed, some of them quite ingenious. A quick search for 'lightning protection" on the

internet is a good place to start. The issue here is protection for your expensive equipment.

3) RF grounding

Here's where the fan tends to get sticky. In order for electric current to flow, a complete circuit from source, through load, and back to source must be provided. Even though transmitted RF travels through space from transmitter to receiver, a return path (earth) should be provided - that is, if you're serious about communicating with anyone by radio. Of course a ground return is not always possible but a good one will ensure that most of the energy in your transmitted signal actually leaves the antenna and heads off in the desired direction. And here's the catch: The physics of radio requires a very short connection between your transmitter and an earth ground. A ground lead that's even a fraction of a wavelength at RF can act as a transmission line, complete with standing waves, and may even radiate energy in-or-out of phase with the energy radiated from your "real" antenna. Worse, reflected power can raise your station equipment to a high RF potential. Anyone who has received an RF burn from a key or microphone will relate to this. The issues are both personal safety and efficient transmission.

Practical considerations

Few of us have the option of locating a station within a few inches of a good earth ground. Remember that the *National Electrical Code* requires **all** equipment to be connected to a common earth ground - the one that's located near the building service entrance. In my case, which is extreme, the station is located at the opposite end of the house on the second floor. The shortest connection I can hope for is a ground rod driven directly beneath the station window, a distance of 18 feet. But what about the NEC requirement for a common building ground? Simply tie the ground rods together with a #6AWG or larger wire. The length of this wire doesn't matter, the object is to ensure that all grounds are at the same electrical potential. You can drive as many rods as you want so long as you bond them all together and to the electrical service ground. I have a total of four and the 18 foot connection from the station to the first ground rod is made from ½ inch copper pipe. (At RF it's the surface area of the conductor, not the cross section that matters.) This works for me but I spend most of my time at the CW portions of the HF radio spectrum. Above 40 meters the long ground lead begins to be troublesome.

At higher frequencies I have to resort to some trickery with "stubs" and tuned circuits. I won't go into the physics of this but if you're interested, you can find out more from the *ARRL Handbook for Radio Communications* or by going to www.arrl.org/tis/info on the internet. The subject of RF grounding is complex and whatever approach you choose will likely end a compromise between the ideal and the practical.

I'm sure you're thoroughly confused and frustrated by now so I won't muddy the waters any more. To paraphrase the immortal words of Charlie Brown and Edward R. Murrow, Good ground. Good grief! Good night and good luck!

Paul Honore' W6IAM

Meter Sporadic Es

The 6 meter summer Es are with us big time. There are openings daily to all parts of the US and Canada. Several Alaskan stations were kept busy a few days ago when there were evening openings two days in a row. Our local 6 meter guru, Johnny, KE7V, was flying high when he worked Spain and Portugal on the 4th of July. A great place to check the band is the DX Spot mapping page at http://maps.dxers.info/ .

73, Bob K6MBY

Field Day Happenings

Ah yes, Field Day! This year welcomed Ham friends, sunshine, non-stop fun and an abundance of delicious food and flowing hot coffee. Thank you Roger and Priss; as always, a job well done.

Although it's only my second Field Day, it kept me hopping just as much as last year's, maybe even more. Having set up the EOC tent (the first time the EOC has been represented at Field Day) with help from all participants, showing the "serious side" of Ham Radio Communications, as well as manning it, I do believe it helped bring in some who last year walked right on by, not knowing who we were, what were doing, or if we were even of this world. All those strange wires and antenna would certainly scare me into thinking the Martians had landed had I not been through the class to become licensed to use those wires and antennas. To all who participated in manning the EOC welcoming tent, as well as all other stations, A HUGE THANK YOU for taking time out of your schedule to come and visit, explain and answer the public questions and hopefully sparking an interest in our club, becoming licensed, and enjoy "our way of communicating". I suppose time will tell knowing positive comes from positive.

But no, no one landed from Mars, no aliens were amongst us...were there?... but Field Day happened upon us in Clallam County. Things had to be gathered from storage, radios packed, coax gathered, tables and chairs for our army of Tech's, Generals and Extra's, tents, and enough orange safety ribbon to make those grounds glow in the dark. Believe me, it saved me once or twice. Then of course, there's that huge antenna raised up on the flatbed, which made it look like anyone out there listening couldn't miss a frequency if they tried. After a few quirks were worked out, and with all those knowledgeable 'minds' coming together, it was just a matter of fine-tuning, and shazam, "on the air we were".

Thanks to you all who made this possible. A couple of turns, twists, and scratch on the head or two, it all came together quite nicely. A little anticipation for Saturday, and by golly, it was time to hunker down and start that oh so familiar chatter...CQ CQ CQ, this is Whiskey 7 Foxtrot Echo Lima... just hoping to hear our call acknowledged. Please, hear us. Come back. Don't NOT hear our yakity yak, our desperation...our excitement.

We were off and running now. No stopping us now for 24 long hours. Sometimes very warm, yet when the sun went down, so did those temps. But it didn't stop us!! CQ'ing till blood shot eyes and hoarse voices took over, just waiting for the next contact. Once it started, come back they did - 479 times. Not too shabby for our small but very significant club.

The GOTA Station, run by KE7XX, and KC7ZQA, (Tom & Shirley Newcomb), is always a big hit with newcomers. This is one of the most important stations for the curious, as it's a great groundbreaker for the way things work in our sport. Once on the air never seems to be enough, and this is where it all begins to get that spark lit. Then come the little more sophisticated upper frequencies, the 6, 15, 20, 40 and 80 meters. I personally found, until I studied them, they were indeed alien. But we all have to start somewhere, and do those youngsters ever get a smile from ear to ear after their accomplishment, their contact! Not only did they receive their GOTA pin, I had them return to the EOC tent for yet another "prize" - a small light for their pocket. Just one more reason to invite their buddies and friends to come with them next year!! One heck of a good-looking pin, a little light, and new friends! What a great reward in itself.

Hams willing to sit and help write Call Signs or literally make a contact with the Station Operator visited all of these Stations. How exciting it is giving each of us more of a reason to upgrade. Just knowing once we do earn that next step up that seat can be in yours to man and have your own personal control throne in your tent at Field Day. Now that sounds like complete dedication to me, let alone " King for the day"....

All in all, good friends gathered, including our new friend Nick from Canada, putting his muscles to work where ever needed. That scrumptious, food, made meal time a real treat indeed. We got a chance to sit, relax and enjoy the company of those we aren't blessed to see enough on a continual basis. A nice, warm feeling I believe. Everyone helped in so many ways it's hard to thank you all personally, but because of all the hard work from you dedicated "HAMS", and laughs shared amongst us, that made for a weekend, which soon won't be forgotten, and certainly something to look forward to again next year.

To EVERYONE who came out to help, THANK YOU. You know who you are, and you are what kept things running smoothly. To all who couldn't make it, we thank you for making contacts with us towards our point total. Your help was tremendously appreciated. With Field Day falling in June, we realize not everyone can make it. But what you do throughout the year, your works do not go unnoticed. We are a TEAM. One I am proud to be a part of. Dedicated

people helping one another, no questions asked. That outstretched hand is what we do best. Training, explaining, finding "good radio deals" for some of us Hams, and always thinking of others and how our skill can benefit another – that's what we do; it's why we do it. Extending that hand in a helpful way... What a TEAM WE ARE!!

So, now that Field Day is behind us and all radios are back at their ' homes', antenna's tucked away, tents folded and stored for next year, there are ideas already needing to be heard, still much to do for preparation into next years 2007 Field Day. Also lots of fun to experience before then. Nothing pressing immediately, but the thought is there. Off in the distance, before we know it, it will be starting all over again. Then we will once again come together with joyful attitudes of CQ'ing and writing, eating, laughing and having fun with the best of the best communicators in Clallam County.

Until then, yet hopefully before, SEE YOU ON THE AIR!!!
73, Nita KE7DRT

Pictures courtesy of Leah Steward, KE7EZS

From the ARRL's website, here is the history of 73:

The traditional expression "73" goes right back to the beginning of the landline telegraph days. It is found in some of the earliest editions of the numerical codes , each with a different definition, but each with the same idea in mind--it indicated that the end, or signature, was coining up. But there are no data to prove that any of these were used.

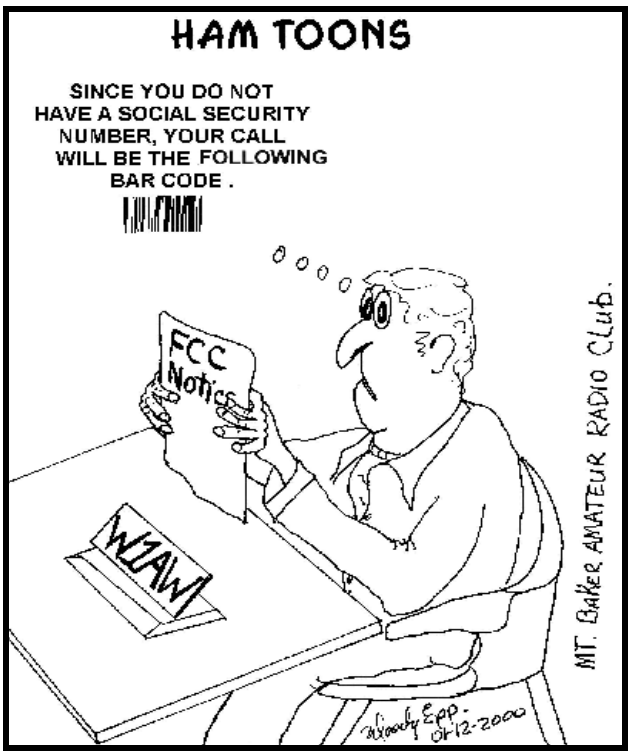
The first authentic use of 73 is in the publication The National Telegraph Review and Operators' Guide, first published in April 1857. At that time, 73 meant "My love to you!" Succeeding issues of this publication continued to use this definition of the term. Curiously enough, some of the other numerals then used have the same definition now that they had then, but within a short time, the use of 73 began to change.

In the National Telegraph Convention, the numeral was changed from the Valentine-type sentiment to a vague sign of fraternalism. Here, 73 was a greeting, a friendly "word" between operators and it was so used on all wires.

In 1859, the Western Union Company set up the standard "92 Code". A list of numerals from one to 92 was compiled to indicate a series of prepared phrases for use by the operators on the wires. Here, in the 92 Code, 73 changes from a fraternal sign to a very flowery "accept my compliments," which was in keeping with the florid language of that era.

Over the years from 1859 to 1900, the many manuals of telegraphy show variations of this meaning. Dodge's *The Telegraph Instructor* shows it merely as "compliments." *The Twentieth Century Manual of Railway and Commercial Telegraphy* defines it two ways, one listing as "my compliments to you;" but in the glossary of abbreviations it is merely "compliments." Theodore A. Edison's *Telegraphy Self-Taught* shows a return to "accept my compliments." By 1908, however, a later edition of the Dodge Manual gives us today's definition of "best regards" with a backward look at the older meaning in another part of the work where it also lists it as "compliments."

"Best regards" has remained ever since as the "put-it-down-in-black-and-white" meaning of 73 but it has acquired overtones of much warmer meaning. Today, amateurs use it more in the manner that James Reid had intended that it be used --a "friendly word between operators."



PCB Design Services

Printed Circuit Board design services by Paul, WB8BVK. Turn those breadboards and prototypes into printed circuit boards. Thru-hole and surface mount, single and multi-layer (up to 16 layers) capabilities. Give me your schematics and specifications and get back Gerber and drill pattern files ready for the foundry.

Got an idea for a circuit that requires a microprocessor/microcontroller but don't have the knowledge or capabilities to design it in? Give Paul , WB8BVK a call or email. 683-6072, pbenedum@earthlink.net

CLALLAM COUNTY AMATEUR RADIO CLUB
Minutes of the General Meeting 6/14/06

The meeting was called to order at 7:05 PM by Roger, K7RGR.

Introductions were made.

The birthday of Frank, KJ7SK was acknowledged.

VE Coordination: The next regular VE session may be in September. Class books will be provided to the trainers by the club. At Field Day, there may be a special VE testing session..

QTC is posted on www.olyham.com and ccarc@yahoo.com. The current edition is eleven pages of awesome work thanks to contributors and staff. Hard copies will be at Field Day per Nita KE7DRT.

The program for the evening consisted of preparations for Field Day. All issues were discussed. If a VE session is held, a secure area will be required. Possible bonus point awards were identified with special mention of ARES participation. ARES will determine what they want to do. Non-traditional modes may be performed by Chuck S. WA7EBH. Official visits and declarations are still being worked on. GOTA and youth participation will need to be tracked for bonus point purposes. The Boy Scouts and Girl Scouts may be contacted to encourage participation. It was suggested that we contact the flea market being held at the fair grounds about Field Day, and locate our banner so that those folks will see it. Red Cross staff has been invited to visit the operation (Mary AC7IY). Advertising in the paper and on radio and television will be handled by Tom KE7XX. Setup will begin on June 23 after 11:00 a.m. and operation will run from 11:00 a.m. on 6/24 to 11:00 a.m. on 6/25. The question remains, who will get the keys needed for entry to the fairgrounds on Friday morning, and what time do we meet to plan for an 11:00 a.m. setup?

Announcements: SeaPac will be held in Seaside, Oregon, on June 17 and 18.

The next CCARC monthly meeting will be 7/12/06.

Other business: Neil WA7NBF recapped Ham's participation in the North Olympic Discovery Marathon. A good job was done by all.

There will be a Fox Hunt on 8/26/06 on the peninsula, with folks coming from Victoria, Seattle, and other places.

The annual party with the Victoria club needs to be scheduled and a place selected (no volunteers yet).

The meeting was adjourned at 8:15 p.m. by Roger K7RGR.

Minutes were compiled by Rich N7NCN from notes submitted by Roger, K7RGR, assisted by Nita, KE7DRT.

CLUB OFFICERS For 2006

President: Russ Fish K7INA 360-452-9195
k7ina@aol.com

Vice President: Roger Uhden K7RGR 360-681-7450
k7rgr@olypen.com

Secretary: Rich Golding N7NCN 360-683-9309
n7ncn@myfam.com

Treasurer: Frank Doherty KJ7SK 360-681-0691
kj7sk@arrl.net

Board Member: Roger Steelman W7GRS
360-681-3534 w7grs@olypen.com

Board Member: Chuck Jones N7BV 360-4524672
n7bv@yahoo.com

Board Member: Tom Newcomb 360-452-8228
ke7xx@arrl.net

HOT OFF THE PRESS!

The new 2006 CCARC directory is now available. Come to the July meeting and get your copy! The directory committee did their very best for accuracy. If you find a problem with your information please submit the correct information via the QTC e-mail address (ccarcqtc@yahoo.com) so it can be included in the next newsletter edition.

QTC Editors: Nita Lyman, KE7DRT, Chuck Jones, N7BV, Bob Sampson, K6MBY
Please send submissions to the QTC via Ccarcqtc@yahoo.com

YL LUNCHEON

The July 14th luncheon will be at the Downriggers Restaurant in Port Angeles.

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!**

COMING EVENTS

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The Pacific Northwest DX Convention (DX 2006) will take place July 21, 22 and 23, 2006, Vancouver, BC, Canada. The BCDX Club takes pleasure in announcing Bob, K4UEE as the keynote speaker. See http://www.bcdxc.org/2006convention.htm

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Description	Time/Date	Location	Contact
Clallam County ARES/RACES meeting	7 pm, first Tue of every month	Clallam County Courthouse EOC, 223 E. 4th 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 5th & 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	

BIRTHDAYS:

Nita, KE7DRT, July 3rd
Jerry, WA7BUY, July 3rd
NiaMarie, XYL of Jim, K7QCK, July 10th
Onida, XYL of Jerry, W6JGC, July 19th
Paul, WB8BVK, July 23rd
Darlene, XYL of Ken, KD7IZU, July 26th
Roy, K7QQN, July 27th
Skip, KD7VVB, July 29th
Maureen, XYL of Al, W7YLV, July 31st

Happy Birthday!

NET CHECK IN HONOR ROLL: Stations that have checked in more than half of the Thursday night net check ins (in alphabetical order)...they are...drum roll please….

N7BV, Chuck
WB8BVK, Paul
KE7CIA, Troy
AD7DG, Mike
W7DNA, Bruce
KE7DRT, Nita
AE7EA, Steve
KG6EI, Carl
KE7EZS, Leah
W7GRS, Roger
N7HFL, Chuck
W6IAM, Paul
K7IDX, Bruce
K7INA, Russ
K7KEA, Elizabeth
WA7LDM, Jim
W7LG, Gil
KC7LTW, Donald
K5MTW, Don
N7NCN, Rich
K7NIA, John
KC7NMN, Bess
W7PRS, Priss
K7QCK, Jim
K7RGR, Roger
AC7RK, Bob
KJ7SK, Frank
K7SWH, Jerry
KD7TFL, Jerry
K7VQF, Ray
W7WEC, Bill
K7WZ, Bill
KE7XX, Tom
W7YLV, Al
KC7ZQA, Shirley

Submitted by Russ K7INA