

Colorado QRP Club

The Low Down

Promoting QRP Since 1994

Club News...



CQC Media DVDs Available

CQC now has available DVDs of the bi-monthly meeting presentations. For those of you unable to attend the meets in person here is a way to see what the club has been up to. Four DVDs are now available. Run length is about 1 hour.

Available Titles

Basic Equipment Troubleshooting

QRP Contesting

Digital Modes for the QRP Amateur

Howland Island DXpedition

Price \$10 each plus shipping

CQ CQ CQ Net controllers

The Colorado QRP Club is in need of Net Controllers for the Monday night 2M nets. It's easy and it's fun. We provide you with the script and you can take it from there to develop your own "Net-tique". If you live on the Denver Front Range from Ft. Collins to Colorado Springs please consider a try at the mike. Contact Jim Pope - KG0PP at Ejim@aol.com



Generations of Hams at the CQC Aloha 2008 site
Call sign AB0CD

Field Day - Fun for Everyone!

If you visited one of the CQC Field Day sites this June, even if for just a few minutes, congratulations! You participated in ham radio's most active event of the year. Congratulations as well if you participated in an other Field Day operation not connected with CQC, as at least some of our members did. You missed out on a whole lot of fun if you were not able to get to a Field Day site, or somehow participate in Field Day. Mark your calendar for the fourth weekend in June next year, so you don't miss the next one.

Yes, CQC sponsors, not one, but two Field Day sites! That involves a lot of planning, cooperation, involvement, and people power. CQC sponsors both a "competitive" and a "fun," or Aloha, Field Day operation. I am sure that this issue of the "Low Down" will include stories about both sites, so I won't go into much detail about each site here.

Many clubs have difficulty enough generating enough enthusiasm to host one Field Day site. CQC has done two, most years, for some time now. Part of the reason for doing so is that there is a core of competitive people in the club who like to rack up high scores using sophisticated equipment and antennas. They have the radio and technical skills to do just

For more information, visit our website at www.cqc.org

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Picture credits to
Pete Inskeep - NO2D
Al Dawkins - K0FRP
Scott Garcia - KC0HSV

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Our next Regular meeting will take place
Saturday, Sept 13, 2008 at 12:00 am
Meeting Location: QTH of KT5E
Jay Schwisow
47400 Becky Circle
Elizabeth CO
Please check www.cqc.org for specific directions



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The Low Down

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The Low Down

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QRP Information Net: The Colorado QRP Club also meets on the air every Monday evening at 2000 local time on the 147.225 repeater serving the eastern slope of the Rockies from Cheyenne, WY, to Pueblo, CO, with linked repeaters in Boulder (145.46) and Colorado Springs (145.16). Backup frequency: 145.145. The Club's Denver metro simplex liaison frequency is 146.445. Meeting Dates: 2004 Meetings: Jan. 10, Mar. 13, May 8, July 10, Sept. 11, Nov. 13 at a location to be determined. Annual Picnic: Sat. Sept 18, 2004. Annual Banquet: To Be Announced. Changes will be announced on the Monday evening Net and posted on the WWW,CQC.ORG website, if time permits.

Informal Monthly QRP Gatherings: Members meet informally at a local restaurant -- details on the web-site. Annual Dues: \$12.00. Join via the internet at WWW.CQC.ORG. Or, send dues and requests for membership applications to: CQC, POB 17174, Golden CO 80402-6019.

Internet: WWW.CQC.ORG. Information, membership, renewals, officers, activities, CQC Swap List and CQC-List subscriptions.

Correspondence: Editor, The Low Down POB 17174. Golden CO 80402-6019.

CQC Logo mugs

Don't leave your shack without it!! Vince, our club Secretary, arm-wrestled a half dozen vendors until we got a good deal on a few dozen of these beautiful, cobalt-blue coffee mugs. Get yours while supplies last!!

Photo courtesy Marshall Emm N1FN



Photo courtesy Marshall Emm N1FN

\$10.00 (Pick one up at our meeting or other gathering)
\$4.00 (Shipping and handling if we mail one to you...)
Order from our web site using our PayPal secure service.

Photo courtesy Marshall Emm N1FN

CQC RFL-10 QRP Dummy Load Kit

The kit consists of 2 5W metal oxide resistors an SO239 socket and includes adaptors for connecting to either SO239 or BNC antenna sockets. Rates to 10W continuous power for at least 60 seconds, with a flat SWR across the HF spectrum.



\$9.00 - Members
(Includes Shipping and Handling!)
\$11.50 - Non Members
(Includes Shipping and Handling!)

New CQC Logo Tee Shirts

These beautiful tees are 100% cotton with the club logo and motto. Your call sign and name call can be added for \$2
Available in sizes XXL, XL, L and M

Photo courtesy Marshall Emm N1FN



Photo courtesy Marshall Emm N1FN

\$12.00 plain or \$14.00 with Call and/or Name
\$4.00 Shipping and handling
Order from our web site or pick one up at the next meeting and please specify size.

Photo courtesy Marshall Emm N1FN

Tentative Meeting
Schedule for 2008:

June 14 - Chat 'N Chew
June 28/29 - Field Day
July 12 - Chat 'N Chew
Aug 9 - Regular
Sept 13 Annual Picnic
Oct 11 - Regular
Nov 8 - Chat 'N Chew
Dec 13 - Regular

Regular Meeting Location:
Offices of Milestone Technologies
10691 East Bethany Drive,
Suite 800
Aurora, Colorado

that, and are always at or near the top of the point score, nationally, in their category. For them, the fun of Field Day is to put forth a “winning” effort in this most contest-like of non-contests.

On the other hand, there are those, myself included, who want to enjoy Field Day in a more relaxed manner. Perhaps one is not highly skilled at the CW paddle, or quite comfortable at the mike, but nevertheless, likes to make contacts. Also, there is much enthusiasm about experimenting with a variety of relatively simple antennas. Can't catch Crappie with that 14 foot fishing pole? Make a 20, 15 & 10 meter antenna out of it, which is exactly what Vince, KI0RB, did. And it worked just fine, even without removing the line guides. Saw the “TeePee” described in QST and want to try one. Yep! AB0CD made one of those.

Both approaches generate lots of camaraderie. At the competitive site camaraderie is built as a few people depend upon each other to do many things very, very, well, so that scores can be maximized. At the Aloha site camaraderie is built as people, who may never before have operated a ham radio, are introduced to ham radio, and make their first contact. It is most gratifying to see the young people sitting at a rig, earphones on, calling “CQ Field Day,” and logging contacts. Let us hope that the thrill of that first contact leads them to get their ticket and enjoy a lifetime of ham radio. There is also the camaraderie of cooking burgers, brats and dogs, and toasting marshmallows. Everyone enjoys that, even if they don't have the urge to key the mike.

The point of all this is that ham radio is really lots of fun, and Field Day may be the most fun of all. It is my favorite ham radio activity, and I look forward to it for months in advance each year. It is lots of fun for different people in many different ways. We always hope that Field Day will introduce ham radio to people and encourage them to become hams. For us old timers, it is an excellent way to charge our own ham radio batteries, and regenerate our enthusiasm for the hobby. It is too bad that Field Day comes only once a year.



LogNotes

*By Dick Schneider, ABØCD
CQC #155*

Are you woodworking impaired?

Then, start thinking outside of the box.

Say you need some small shelves for your QRP shack, or a compact set-up for a second operating position in the house, under the theory that all homes should have a minimum of two operating positions, provided you have the requisite permission from the XYL or OM? Or, perhaps you're looking for convenient accessories to organize tools, parts and other odds and ends. But you don't want to start cutting wood or swinging a hammer. If that's the case, it's time to think outside of the box.

For example, the other day I drove my artist Mom to her local craft store so she could load up on art supplies. While killing time by wandering amongst the post-holiday sales bargains, I spotted all sorts of things that could be used in the shack. What caught my eye at first were different sizes of rather smallish, unfinished wooden shelves and boxes. A few of them were the perfect (or nearly perfect) size for some unique, but very practical, QRP shacks. One small set of shelves came with pull-out basket drawers. The baskets could be used elsewhere in the house, while the remaining small shelf set would have been ideal for a QRP mini-shack positioned on the corner of the desk in the home office.

One interesting set of shelves stood about three feet high and 10 inches wide. I envisioned a rig, like an Oak Hills 500, sitting on the top – just above desk height. The rest of the accessories – wattmeter, power supply, battery, earphones, keys, etc – might live on the lower shelves. With the rig just to your right (or left) and the key on the desk, you could be working a fox hunt or a QRP contest, while the rest of the family left you alone to rack your brains over the family taxes.

The cruise through the craft store also turned up some nice kits that could be used to take spare parts, rigs and other items out into the wild (think Field Day) and a neat wooden lazy Susan that for small parts and tools on your bench. Since you're so hammer and nail averse, don't forget the home improvement store where you can pick up the handy white melamine-covered particleboard shoe racks and shelves – items I've used for years in my shack.

-0-

Some compelling “For Sale” copy found circulating inside the Internets, youbetchya...

“Yaesu FR-101 Digital Receiver for parts or Restoration...Now this unit was worken when i set it on the shelf but i plug her up and nothing now i did ck the fuse it wasnt that but it cant be much because she was worken just fine, if u know how to tinkle around with em it would be an easy fix i just dont have the time thats all or i would fix em as u see in the pitcure the dial is missing which i

do have somewhere around here i jst forgot where i put it so before the auction is over i should be able to find it ...Thanks for viewing.....Happy biddin..."

-0-

With Elmers like this, who needs enemies?

Ever wonder why some hams just come off as annoying know-it-alls? This guy clearly can advise on any issue, whether he knows anything about it or not. The following was found circulating inside the Internets:

"My good friend Larry, W#2@\$%, is strongly thinking about purchasing a Jupiter. He asked my opinion and I wholeheartedly endorsed it, even though I've never used one (I run an OMNI VI+.) He's not a big DX'er, but operates more CW than SSB. He really doesn't want to spend much more than the going price for the Jupiter. While looking at radios, he mentioned that the IC-746 had lots of features and was around the price figure of the Jupiter. Never having used the 746, I surmised that the Jupiter would have the better receiver dynamics and ergonomics (less menus, easier to use.)"

This guy's doing a rig-to-rig comparison on two radios he has never used! And, he's recommending one over the other based on his experience with an entirely different radio. With Elmers like this it's no wonder we can't get anything across to kids.

-30-

Dick Schneider, AB0CD, is a former editor of The Low Down. He can be reached at AB0CD@arrl.net. © Dick Schneider

With that in mind, if you missed this year's Field Day, you should definitely mark your calendar now so you don't miss it next year. Hope to see you at one, or both, of our Field Day sites next year.

Just for kicks, what is my second most favorite ham radio activity? Well, Dayton really has to be close to the top of the list. If Field Day does not give you a radio jolt, Dayton is a great way to recharge your batteries. With that thought in mind, and many months to go before the next Dayton Hamvention, I would like to challenge the membership to come up with a plan so that a number of us can attend Dayton next year. Start saving your pennies now!

As for CQC activities, our next meeting will be our Annual Picnic, which is being held at the home of Jay, KT5E. Jay is blessed with a large piece of land, huge towers, and the nerve to climb them. Jay plans to set up an operating tent so we can all get the thrill of what comes in off a yagi at 100 feet. Don't miss this one! Details are on the www.cqc.org wet site.

Let me close by giving a special thanks to Al, K0FRP, and Dick, AB0CD, who respectively spearheaded our two Field Day efforts. And thanks, also, to everyone who pitched in to make both of our Field Day events great successes.

Pete, no2d
President, CQC.



**Bugs eye view of W0CQC Rampart FD
2008**

A Morse Code Tutorial

Pete Inskeep, NO2D

April 29, 2008

Note: This is the beginning of a serial article, intended to be published in installments over a period of time. Each part is an installment. Only Part I: is ready for publication. Be forewarned that future articles may become somewhat technical with respect to both the Linux operating system and the C language, although I know very little about either one!

Part I: Some historical background.

Back in 1978 the Sunspot Cycle was near its peak. The 20 meter band was open for close to 24 hours a day. Hams using 10 watt converted CB rigs were making routine contacts with European stations on their lunch breaks. Times were good for hams, and very different than they are today as we impatiently await the long overdue coming of the next sunspot cycle.

The late 1970's and early 1980's was also a time when the first desk top computers were beginning to appear. Atari, Apple and Commodore were but a few of the companies that were jumping into a fast growing new field. Amateur radio operators were quick to grasp the computer's potential, especially for sending and receiving Morse code and RTTY.

My oldest son, Peter, then about 13, fell in love with computers. He worked hard at his newspaper route so he could buy an Atari 400. It was his computer, but he would sometimes let his Dad "play" with it. Dad had recently received his ham ticket and was eager to see if he could "program" the computer to send Morse code. Numerous articles in the computer magazines of the day included entire programs for a variety of purposes. If I remember correctly, an issue of QST included a basic program for creating Morse code at the keyboard.

That program was quickly typed into the Atari, painstakingly debugged, and, finally, it worked! Little did I know at the time that playing with that simple program would start me on a quest that to this day is still not satisfied. That quest was to create a working Morse code program for sending code via the computer keyboard to a transmitter.

Today one would wonder why that was such a big deal. There are literally dozens, if not hundreds, of Morse code sending, receiving and logging programs available for computers of every kind and stripe. But, back then, there were virtually none. Those few that did exist were very expensive and not easily obtainable (ie., no internet with free downloads).

Soon my son Pete took me aside and explained to me that he worked hard to get his computer, and he wanted to use it. I got the hint and purchased my first computer, a Commodore 64. Fortunately, the basic programming language for the Atari and the Commodore were almost identical. So I just retyped in my basic program on the Commodore, and it seemed to work just fine.

I soon learned, however, that the basic language is pretty slow to process things. It is especially slow to process Morse code. I realized that I needed to do something to speed up the computer. I discovered that programs written in "assembly language" ran much, much faster than those written in basic. So, I began the daunting task of learning "6502 Assembler." 6502 referred to the processor that was common to both the Atari and the Commodore 64. I soon found that programs did indeed run much, much faster when written in assembler. On the other hand, though, it was much, much more difficult to write programs in assembler.

Despite the drawbacks, I was eventually able to write a fairly useful program on the Commodore that would send code as well

log to see if a station had previously been contacted. What I had created, in effect, was a contest logging program.

Over time the Commodore 64 was replaced by an Amiga 1000. That meant learning a whole new set of assembly language instructions. The Amiga was much more powerful than the Commodore, more fun to use, had a color screen, and could talk. But, it sure was a lot more complex than the simple Commodore 64.

It soon became apparent to me that I could spend a lifetime learning Amiga assembler (Motorola 68000 assembler, named after the Motorola processor used in the Amiga). Then I would consume a second lifetime writing line after line of assembly code to do some very simple things. About that time a kind friend introduced me to a “higher level” language called C. Many computer operating systems, and applications programs were then beginning to be written in C. The Amiga operating system was largely written in C. I set out to learn the C language.

Over time I became exposed to other computers, and other operating systems. But, the C language has “stuck” with me, probably because it can, with relatively few modifications, be used on any number of different computers and operating systems.

I eventually discovered the Linux operating system. It, too, was written in C, for the most part, and programming it in the C language seemed to be the natural thing to do. One nice advantage of Linux is that most distributions include all the programming tools that anyone would need to write programs, and especially, a wealth of C programming tools. Oh, and, did I mention that most Linux distributions, and there are many, are free? Mention the word “free” to a ham radio operator and you have a friend for life!

That brings me up to the present time. My quest? Still working on it. Still using the C language to develop a useful Morse code program. Still trying to learn more about the C language. But now I am also trying to learn the more difficult, but more powerful C++ language.

So, what is the point of this long drawn out historical review of my efforts to write a simple program that one could buy or download for free today? The point is to provide some background for a series of articles in which I hope to be able to help you learn how to program your computer, using my Morse code program as the example and learning tool. In the next installment of this series I will explain the basic mathematical algorithm that I use to generate Morse code. How does the magic of the computer change a key pressed on a keyboard into a character transmitted over the airwaves by your favorite transceiver? Stay tuned.



CQC Aloha FD 2008 Cherry Creek State Park
No bugs but it did have granite counters

Colorado QRP Club Field Day Aloha 2008

In 2007 Dick Schneider, AB0CD, resurrected the idea of an “Aloha site” for Field Day. The idea was to provide CQC members, family and guest a site where operations were relaxed, informal and fun. It turned out to be a great success and plans were made to host an Aloha site for 2008. The 2008 event turned out to be another success with about 25 people turning out for the event. We had several families camp in with us for the weekend as well as a number of drop in visitors that were able to operate and share our fun. The main event was setting up and operating AB0CD as a club station. In addition to operating the beautiful weather made for a great weekend to bike, walk, go swimming at the reservoir. Speaking for my two labs...they had a great time in the water and going for a walk. The park also hosted a camp fire talk Saturday evening on the history of the locale during the 1800. The presentation, by a local historian, was complete with a collection of bear skin coats, Indian headdress, and clothing. All of which you were encouraged to try on. After that it was hard to believe that today the camping area even provides hot showers and wonderful accommodations for its guest.

2008 saw the CQC Aloha site returning to Cherry Creek State park again. The site is close to metropolitan Denver but rural enough to provide that “get away from it all” feeling. To our surprise the site we obtained within the park this year had been completely renovated thanks to the funds provided by the Colorado State Lottery. This year’s site at the Arapahoe camp ground within the park was quite impressive. The site provided RV hookups, tent camping areas and provided our group with our own bathroom and a great meeting

pavilion. It might be over the top but the dining area had granite counter tops. It might be considered irony but as we were setting up I noticed we had a spare 50 amp breaker for a QRP event. The most impressive aspect of the Arapahoe site was the dining and meeting facilities. A new pavilion gave us a wonderful place to set up the operating positions with plenty of tables and a sheltered area for all to gather. While AC power was readily at hand we did stick to operations on battery power and 5 watts QRP.

Participation this year was up. Several families attended with many kids getting a hand at operating and making contacts. Easily three generation got on the air. Those that were not operating were busy helping set up and providing food and a good time. Some of our visitors were able to attend by arriving by bicycle thanks to the great network of bike trails that surround the Denver area and access the park. I biked over from my house on Friday evening to help set up antennas but returned Saturday with my XYL, BJ, in a car filled with camping equipment.

If there is a down side to Cherry Creek is the lack of a decent tree in which to launch an antenna. Our “farm” consisted of a couple of dipoles erected on light weigh masts. One dipole was used for 15 and 20 meters. The other dipole was cut for 40 and a “passable” 80 meters. The first dipole provided by Dick Schneider, AB0CD. Using a light weight mast it was a bidirectional fan in an inverted V layout. The second dipole was erected on a slip together aluminum mast provided by Pete Inskip, NO2D. Pete found this item at a local hamfest and as I later found out this mast is designed to hold up camouflage netting for the military. Sectioned together to 30 feet this mast is quite suitable once it’s guyed. These masts are available in several styles and I purchased a set of fiberglass ones from the same vendor. Another antenna was a stripped down Gap Titan for 20M provided by Scott Garcia, KC0HSV. We used this antenna last year and it work very well. I love my GAP and have one at my QTH. For this year Scott stripped it down to operate 20 meter only. The final antenna was a portable “fish pole” end fed based on a popular design by Jake Groenhof, N0LX (hometown.aol.com/n0lx/hamradio.html). I built this antenna using a 14 foot graphite fishing pole on a stand made from PVC pipe section. Jake has several end fed designs on his web site and is very successful at pedestrian, bike and marine mobile operations. Full details for building your own end fed antenna are available on Jake’s web site.

Radios consisted of a Elecraft K2, Yaesu FT-450 and FT-817 a pretty atypical QRP lineup.

The results? Well we had a great time. Can say we set any records but everyone that tried made a contact. While the official results are not available at this writing I’m told we did double our CW contact number from the Aloha previous record. I would attribute this more to our enthusiasm rather than any equipment improvements. My own impression is that Dick was able to accomplish what he set out to do and that was to provide a very fun and enjoyable weekend of ham radio and family fun. Thanks Dick! Hope to have an even better time in 2009 which we are planning even now.

73,

Vince Kumagai
KI0RB



QRP doesn't mean you can't have antennas.
W0CQC Rampart FD 2008

CQC RAMPART UNDER CONSTRUCTION STAY TUNED

Stories and pictures for the CQC Low Down are provided by CQC Club Members. Please consider sharing your QRP experience with other members and friends. All stories are welcome and appreciated. They can be submitted to KI0RB@arrl.net



Jay - KT5E operating his "K3" at Rampart site.



**Delivery and setup not included.
Al - K0FRP , Paul - KF7MD and Frank K0FEI
at Rampart site.**