Our Next Meeting

WPX Preparation
K6SRZ on behalf of N6BV

Date: Monday, 12 February 2007

Time: 6:00pm schmooze, 6:30pm dinner, 7:00pm program

Location: Vic's, 1125 San Carlos Avenue, San Carlos 94070   650-595-2606

Directions: Vic's restaurant is located on the corner of San Carlos Avenue and El Camino Real just one block south of Holly Street & El Camino Real. From 101, take the Holly Street exit.

Dinner, $25, choice of:
- London Broil
- Salmon
- Pork Chops
- Chicken Parmesan
- Vegetarian

Includes salad, ice cream dessert, coffee/tea and tax/tip.

Please RSVP to K6EU by Friday, 9 February.

NCCC Officers

President: Dean Straw, N6BV
Vice-President and Contest Chairman: Fred Jensen, K6DGW
Secretary/Treasurer: Tom Carney, K6EU

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Webmaster: Ed Muns, W0YK   w0yk@msn.com
JUG Editor: Rob Brownstein, k6rb@baymoon.com

Musings from the President
By Dean Straw, N6BV

The January 8 NCCC meeting was held at Chevy's Fresh Mex in Emeryville, with a solid turnout of NCCC ducks attending. While the one-on-one camaraderie was great, the background QRM from the restaurant was very loud. The curtains used to form a "meeting room" were ineffective at reducing the noise, especially with a football game blaring away on the many televisions at the restaurant. Everyone was challenged to put on his best phone contest voice and to QRO above the din.

We have thus changed the place at which we'll be holding the Feb. 12 meeting to Vic's Restaurant in San Carlos, instead of Chevy's Fresh Mex in Foster City. See the NCCC Web site for details. The discussion topic for the February 12 meeting will be the upcoming WPX SSB and CW contests, where NCCC will be making a concentrated effort to dominate the club competition. Our stalwart VP/CC, Fred, K6DGW, has stepped up to the plate to be what he calls the "WPX Flogger." Expect to hear from Fred as he helps steer NCCC towards victory in the WPX!

Speaking of club competitions, when Ed, W0YK, returned from Aruba, he updated the NCCC listing of scores submitted to ARRL for the 2006 Sweepstakes. Ed came up with a total of 21,286,318 points for NCCC. PVRC recently published in their January Newsletter a claimed total of -- get this -- 21,218,288. That's 68,030 points separating

the two clubs, a 0.3% difference -- one medium sized log, in other words. That's how incredibly close the competition is for the 2006 SS. As I've been saying for months now, it will all come down to the log checking.

PVRC president Jim, WX3B, and I have both written short sidebars describing the 2006 SS from our respective club's point of view. Hopefully these sidebars will appear in the *QST* and/or the ARRLWeb reports on SS. Stay tuned.

I'm getting a lot of positive feedback from other contesting clubs to whom we sent "SO2R Contesting," the highly entertaining and very instructive DVD produced by our own Rick Hilding, K6VVA. Yes, we could have selfishly hoarded such training information for ourselves only, but as a club we decided to try to further the game of contesting itself by freely distributing Rick's DVD.

I'm really proud of the NCCC for taking this "higher road." And we should also hope that more SO2R stations will be coming on the air. This should make Sunday afternoons during Sweepstakes less excruciatingly, because they'll be more contesters to talk to.

73, KB and Kick, Duck!

Dean, N6BV

VPCC News and Views
By: Fred Jensen, K6DGW

I suspect by the time this is being read, the CQ 160 will have joined several of the recent contests in history. The NCCC RTTY RU effort was really outstanding. We still have a few logs (that I know of) outstanding, and there may be a few others

we don't know about lurking in the shadows also. Logs must be postmarked or have an email date/time stamp of 6 Feb 07, so please … if you operated, we want your log! Like SS, it's a tight race with our brotherly competitors in the Colonies. Cabrillo logs to rttyru@arrl.org
The NAQP CW saw a big 7-Team NCCC turnout and some very impressive scores despite somewhat underwhelming band conditions, none of which we can do anything about. NAQP SSB, which just concluded as I write this, saw a smaller turnout among both NCCC and, so it seemed, others too. Possibly the winter contest crunch is wearing folks out? A couple in my family have said, "Just how many of these do you have? Is this an excuse to not do the fix up things around here?" My answer is "Hey, does it really matter in the big picture?" That doesn't seem to have totally carried the day for me, however no one has cut the power to the shack off either, and the most important person in this relationship just signed up for two hobby weekends herself, so I think this will work out.
Thus encouraged, February offers a full plate, all at the right side of the calendar except NS on Thursday nights.

2/3   1600 - 2000PST: NA Sprint SSB

2/10   1600 - 2000PST: NA Sprint CW

2/9   1600PST – 2/11 1600PST: CQ WPX RTTY

2/16   1600PST – 2/18 1600PST: ARRL DX CW

2/24   1000 – 2200PST: NAQP RTTY

There's a lot of others, see Bruce's calendar for a full rundown. Bob, W6RGG, is organizing the two Sprints, so please get your operating plans into him as soon as you can, w6rgg@arrl.org
There has been a lot of club interest in the CQ WPX aggregate Club competition. CW+SSB for one, and RTTY is separate. I

could really use a couple or three of volunteers to act as Flogger Dudes for these. For the WPX's, there is no "Club Circle," and those of our members who can and do operate off-shore can rack up huge scores for the benefit of our club as well as our usual stellar domestic operations. If you'd like volunteer, just drop me an email. If you've never flogged a contest for sign-ups and would like to get your feet wet, we have a lot of mentoring sources, starting with me. Note that the NCCC end-of-year and elections will split the WPX, as it usually does.

Speaking of RTTY, it seems to be growing in popularity. We have a number of "RTTY Masters" who can provide assistance and operating guidance to any newcomers. In addition, we have a compilation of "RTTY Tips" on the members web site. Just be careful, the sub-band allocations have just changed and that part of the "Tips" may not have been updated yet.

As usual, my profound thanks to my group of mentors, advisors, and helpers. As a newbie to both contesting and the NCCC, I could not do any of this without you.

Always Refer Service to Qualified Personnel
By: Dave Curtis, N6NZ

My FT-1000MP display died right before CW SS. The problem turned out to be a blown fuse. My daughter, Shiloh, age 7, not only helped with the repair, she pretty much elbowed me out of the way.

Except for the actual soldering, she did it all (with a little coaching).

When it was all buttoned up again, she said: "Let's test it. Let's listen to some Morse code."

Big Winds Hit Europe

With winds of up to 135 mph blasting England, Holland, Germany and other Northern European countries, many ham antennas were laid to waste.

Hurricane force winds are a rarity in Europe, but have occurred more frequently during the last 20 years.

Two-element triband at G0OXO before the storm.

Same antenna after the storm. Sustained winds were clocked at 57 mph.

Storm batters Brighton.

Tower crane toppled by winds in Europe. (all photos, Charles, M0OXO)

RTTY Contesting for Newbies
By: Rob Brownstein, K6RB

I always thought of myself as open minded but have to admit my perception of RTTY was "what's the big deal?" You tune in a station, and your computer deciphers the frequency-shifted keying and spits out the alphanumeric characters. It seemed like you had to do more work than that for a phone contest. So, what's the big deal, right? Wrong! There's more to it than meets the eye.

After 10 years in NCCC, the member who I find myself most aligned with is Ed, W0YK. Like me, he's not big on phone contesting. Like me, he thought spotting was a wimpy thing to do a few years ago. And, Ed has always struck me as open minded. So, I was fascinated by how he took to RTTY like a duck to water (a different duck metaphor).

So, I decided to give RTTY a shot. I didn't expect much – after all, I thought the computer did most of the work – but I figured there must be some challenge to it if Ed really liked it.

Getting started
If you're going to try RTTY, you should understand how it works. It is a 100-percent duty-cycle mode – like AM radio. While you're transmitting, your carrier is on all the time. It's a binary mode, like CW, in that characters are formed by the encoding of two-distinct tones called "marks" and "spaces." So, while the carrier is on, a sequence of marks and space tones are modulated onto it.

On the receiving end, a demodulator converts the marks and space tones into alphanumeric characters and prints them out on a display "window's" screen. There is a 170 Hz difference in frequency between RTTY mark and space tones. So, a RTTY signal fits comfortably in a 500 Hz bandwidth, even a 250 Hz bandwidth.

You have essentially two ways to produce a RTTY signal. Audio frequency-shift keying (AFSK) software basically converts what you've typed in into mark and space tones by whistling into your microphone input. So, your computer sound card's output provides the audio input to your rig's mic socket. You are in LSB mode and simply whistling up a storm.

FSK, on the other hand, simply switches a rig's internally modulated carrier frequency between the mark and space values. Here, your rig input is to a RTTY port where your software/computer switches the FSK and PTT lines.

If you have a radio that has a RTTY port, then all you need to do is hook up an interface from your computer's serial COM port or USB port to switch the FSK and PTT lines. If you have an older rig with no built-in RTTY, then you use the sound card's audio output connected to your mic input and set the mode to LSB. That's it.

Oh, yeah, you also need software that can convert the mark-and-space modulated signal into letters, and letters into mark-and-space AFSK whistling or FSK switching.

If you are using WriteLog, you already have most of the software you're going to need. And, I might add that 80 percent of RTTY contesters prefer WriteLog. That's what I use, so I don't know how other programs handle things.

WriteLog already has its own demodulator built in, but the people I've talked to say it is "just okay." Instead, you can freely download a program called "MMTTY," and another small program (called a "plug in") that integrates MMTTY with WriteLog, and you're good to go.

The last connection is the one you need to convert the received RTTY signals into characters. You run a line from your rig's audio output (preferably a fixed-level output) into the line-in or mic input on your

sound card. You may have to adjust the line-card's audio level to get the optimal value. Also, make sure if you are in the mic input (red socket), or the line-in (blue socket), that you select that correct input and set the volume on your computer's volume adjust window.

By the numbers
Once you've got both interfaces connected (e.g. the audio interface and the AFSK or FSK interface), it is best to first try tuning in a RTTY signal and making sure that that function is working properly. It's a real kick the first time you tune in a signal and start seeing the gibberish (created by demodulating the random noise) turn into recognizable words. Play with the tuning; try the different demodulator filters; try turning on and off the squelch function.

Once you've determined that the receive side is working correctly, then, using WriteLog, set up a RTTY Round Up module and put a "test test" into the F2 message slot. Use a %R at the beginning of the message and a %E at the end. Turn on your rig's monitor and listen to your phones while you transmit the F2 message. If everything is working correctly, you'll hear a signal in your phones that sounds like the RTTY signals you've been listening to, and you'll see your WriteLog RTTY window start printing in blue italics *TEST TEST.* Watch the meter on your rig to make sure you are keying it (if not, you may have a PTT problem).

In my case, the MMTTY portion of the WriteLog RTTY window was defaulted to use AFSK, so I was not keying the rig. I went to the "misc" tab on set up and found a parameter setting for FSK, and that fixed it.

Setting up for a contest
My first contest was RTTY Round Up, which happens in January. There is an NAQP RTTY contest later on in the year. Both are good ones to get your feet wet in because most of the activity is North

America, so the signals are both plentiful and reasonably strong.

I've gotten used to assigning my function keys on WriteLog to certain messages. F2 is my CQ, F3 is a "tu," F4 is a "tu test k6rb," F5 is my call (when S&Ping), F6 is my exchange, F7-F10 vary depending upon the contest and exchange info. So, I used the same keys for RTTY. In RTTY RU, F2 was %R cq ru de k6rb k6rb cq %E. Each message starts with a line return (%R) and ends with a transmit release (%E). The "cq" on the end is so that if someone tunes in after the leading "cq" they will know I am looking for a call.

I wondered why you put your call in twice; your QTH in twice or thrice; etc.
I found out. Remember, the RTTY standard expects a fixed mark and space frequency with 170 Hz of difference. There is a little tolerance in each demodulator, but not much. In a perfect scenario, the frequency is empty and there's no QSB or QRN. In reality, there may be all kinds of stuff sharing your bandwidth including multiple callers.

Interfering tones cause strange demodulation effects. My CQ might look like "CQ RU DE ;-RB K6-;". My exchange might look like "P4 X DE K6RB 5;0 ;- CA C" You will get used to pulling the pertinent info out of junk characters. That's why you repeat key information. People are expecting a "599," so you only need to send that once. But, it's a good idea to repeat your SPC info. Trust me, it gets garbled. My F10 key was "QTH QTH QTH?" And, my F7 key was "NR NR NR?"

Doing it
On your first time out, I recommend camping on a clear frequency and CQing for a while. This will give you a chance to get the rhythm of a RTTY contest – how quickly to respond; how long to wait between CQs; etc. Then, I strongly urge you to try S&Ping. At first, you'll find that you are tuning through a signal too quickly, or

having trouble getting clean copy coming back.

One of my discoveries was that some rigs are not all that frequency stable. A shift of 10 Hz while copying CW is barely noticeable but a wiggle of 10 Hz in the mark and space tones can screw up the demodulation on some characters. So, in fact, the problem may not be your tuning but their stations.

I recommend using a 500 Hz or narrower filter. Ed prefers 250 Hz. When you are open to 2000 Hz, you'll be hearing and receiving a lot of adjacent-signal stuff. It will make it harder for your demodulator to sync on one signal. QSB will also create demodulation errors. My original perception was the computer does all the heavy lifting. In reality, your brain has to do a lot of interpolating or you'll be sending "agn agn?" way too often.

In sum
RTTY contesting has its challenges. Yes, the computer is encoding and decoding for you, but its print out will not be clean very often. The difference between a decent run rate and a mediocre one may rest on your brain's ability to filter out the junk and grab what's pertinent without need for more than one repeat.

If you're finding that you're running stations and are now being called by LP stations which are barely exceeding the squelch level, turn off the squelch. You'll be surprised at MMTTY's ability to decode signals that are barely audible to you.

Some differences between a CW or phone contest and a RTTY contest are: the running station usually sends a "YOUR CALL TU DE HIS CALL CQ" after receiving your exchange. You do not send a final "TU" message, you just move on. I did not experience that little dance we do in a CW contest where the running station who knows there's a queue simply sends "TU" and waits for the next caller. Most send a

YOUR CALL TU … CQ or YOUR CALL TU…QRZ? confirmation after they receive your exchange info regardless of whether there's a queue.

Some operators spell out too much stuff. I had one respond to my QTH? query with WI WI WISCONSIN. He could have sent four WIs instead of Wisconsin and still saved a few seconds, and I wouldn't have had to

play "Wheel of Fortune" with his W S- ;N SN print out.

I can see there is a learning curve to RTTY contesting, and by the end of my 10 hours, I had learned a lot. I'm anxious to try it again, soon, and highly recommend it to others who thought "what's the big deal." It is challenging and fun.
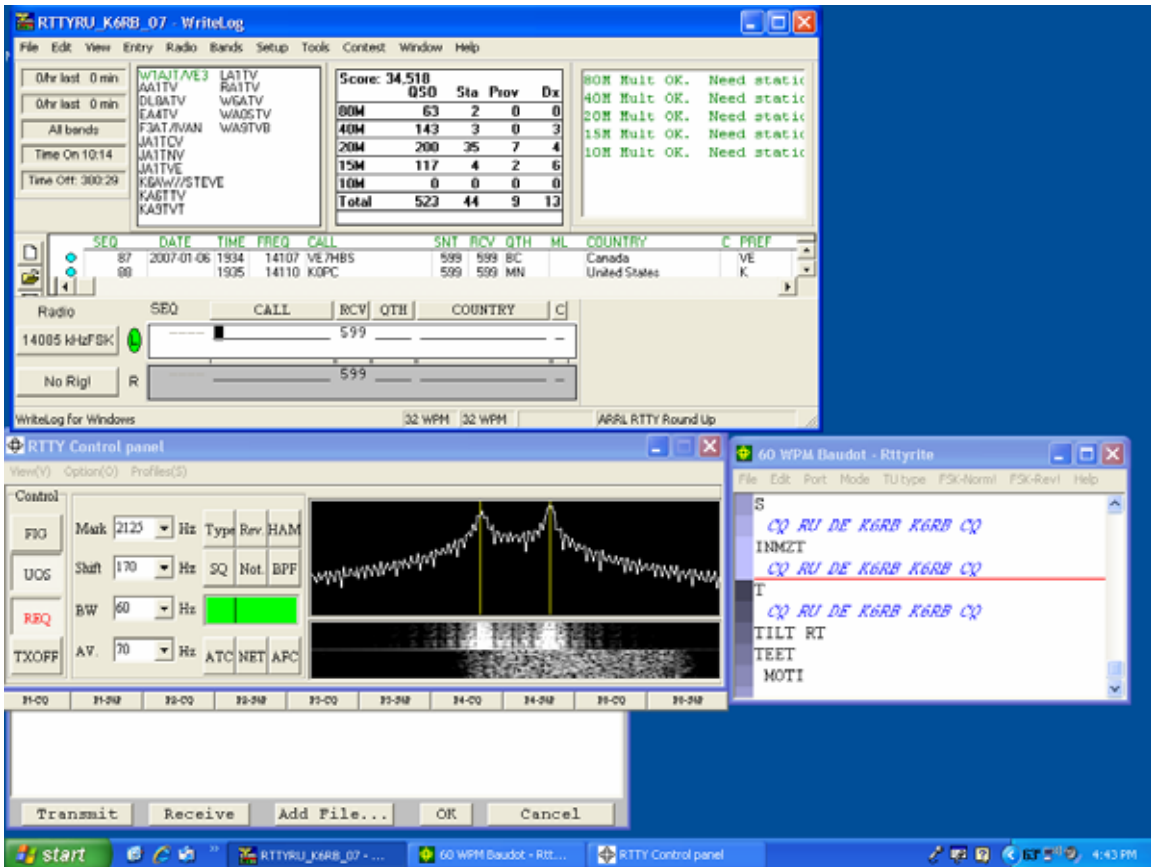
This is how my screen looked in RTTY RU. The top window is the usual contest module window. Left, middle, is the RTTY control panel. The scope screen shows the mark and space tones lined up with the yellow references. Below it, the "waterfall" view shows the two thick lines lined up with the references. This is your tuning aid. The middle right screen shows incoming and outgoing messages. Incoming are black, non-italicized characters; outgoing are blue, italicized characters. The bottom left screen is the "type ahead" window which allows you to type and send an ad-hoc message.

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