JUG
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NCCC
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NCCC Net
Thursday 8 PM
3853+/-

Our Next Meeting
Program To Be Announced

June 13, 2005: 6 PM shmooze, 6:30 PM dinner, elections and programs.

Location: El Patio, 37311 Fremont Blvd., Fremont
Tel: 510-796-1733

RSVP to W0YK (w0yk@arrl.net) by 5pm Sunday, June 12, 2005

A two-item dinner (From Enchilada, Flautas, Tamales) plus salad and a soft drink will cost us $15.

Contest Results can be sent to:
nccc@contesting.com,
3830 reflector,
w0yk@arrl.net, or
W0YK, POB 1877, Los Gatos, CA 95031

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Mike's Mic

Mike Heideman, N7MH

Who would have thought that 15 meters would be so spectacular during this past weekend's WPX CW contest, considering we're rapidly approaching the sunspot minimum.

Running Europeans and Asians at 3 AM on 15 was just unbelievable. Conditions deteriorated on Sunday, but this just drives home the lesson that you won't know what you missed if you don't get on the air.

In K7NV's VP/CC column, Kurt presents the NCCC plan for this contest year. Sweepstakes, as always, is the main event for NCCC. CQP will continue to be the premier state QSO Party. With the declining sunspots we're also focusing on other domestic contests with team competitions like NAQP and the Sprint contests. I won't steal any more of Kurt's thunder, read his column for the complete plan including DX contests, mentoring, and much more.

Now that this year's rainy season has ended and the weather is nice it's a good time to put up those new towers and antennas. It's also a good time to take care of maintenance on the existing antenna farm.

Field Day is less than a month away. We encourage all members to join their local clubs to participate in Field Day. This is a great opportunity to mentor others and possibly bring new members into NCCC.

As an alternative, or in addition to participating with your local club, consider visiting Radio Oakley where Ken - N6RO and Kurt - K7NV are offering an SO2R clinic. For those of you who have never tried SO2R, this is a great chance to see how it's done.

Hope to see all of you at the June 13 meeting in Fremont and on the air during Field Day.

VP/CC Report

Kurt Andress, K7NV

Here is my agenda for the coming contest year.

Focus Contests:

CQP - This is a no brainer. We already have a great PR activity ongoing with W6ZZZ & N6RCE. We will need someone to coordinate the County expeditions, or at least keep track of them. It would seem appropropriate for the greatly anticipated 40th to have all counties on the air. This would be a great opportunity for connecting op's with host stations, as that makes sense for them to get out teams of HMO's et.al together in preparing for Sweepstakes.

Sweepstakes - This is still the best bet for a high profile contest WE can win!

I hope to make this year another winning one in establishing a long string of NCCC wins during the down solar cycle years, making all our opponents scratch their heads and get it in their mind "they just can't beat the NCCC." We got knocked off when we lost focus and collective desire, but this is probably the contest NCCC uniquely can own if we want to make it so!

NAQP's - We have done pretty well in these in the past. They are not terribly taxing contests, with a short time period, and lots of opportunities for shaking down stations and op's. The low power requirement puts it within everyones reach and is another place for guest op's and hosts to see if they can get something going.

Sprints - These are short contests, making them within the reach of most folks' schedules, when planned for, even though they are quite challenging. This is by far the very best S&P practice one can get in a real contest environment, which will help every participant in the other contests!

RTTY Roundup - Our RTTY guys are good at it, and if they want to go at it again, we should root them on in style.

I also want to add the NCCC mini NS contests on Thursday nights. It is a truly unique NCCC gig, and probably one of the most beneficial things we can do to offer members a chance to regularly practice contesting in a real world environment, and get immediate feed back and suggestions on the net. It, and the NCCC focused mini's before major contests, have become an NCCC trademark across the country, and does nothing but boost the Club's image amongst active contesters!

Surely not everyone can make the Thursday night net or mini's but for those who can, it is a great opportunity.

DX Contests:

I don't think we can mount potentially winning efforts in the DX contests for a while, but I don't think we should ignore them.

In order to promote member activity in the DX contests, I propose we setup some format for our stations to have a little friendly local competition.

Most of us can't compete on the National level, but we can sure duke it out here among ourselves. I haven't come up with a meaningful structure for this, but here are some thoughts:

I think we can either 1), make it only a secret NCCC thing; or 2), make it a West Coast thing offered by NCCC.

The entire reason for doing it is to:

1) get our guys on for these contests to have fun and get more experience, and
2) recognize how they did by providing a reference frame to do that.

We should consider a few different categories for the local competition classes. The first ones might be op time, something like full time and half time. For example, whatever the standard contest period is, we have full- and half-time classes.

We can consider a few (maybe three) station classes, "Heavies" (stations with more than one tower), "Lights" (stations with only one tower), "Ultra-Lights" (stations with only wire antennas). The whole idea is to divide it up equitably so those guys who ought to be competing with each other will be doing so. It's not for a Club effort but for their own fun, satisfaction and the respect of their peers. This could have paper certificate awards, or none at all, just listings on the Club website.

Maybe an annual winner in each category for a selected group of contests could get something at the awards dinner.
The purpose of any of this is to get our people active, learning more, having fun, and being able to compete with someone in their station time zone. It's all about providing reasons for stations to get on and give themselves a workout, and get recognized for their efforts. This makes for better NCCC op's on all levels.

Mentoring:
N6RO and I are going to give it a try at N6RO for Field Day, and offer a "contest clinic" for anyone wanting to come see what we do, show us what they do, and swap ideas. All of us get to critique each other with helpful hints and ideas, and then go try them under real-world conditions. I hope we can figure out how to do this more times, at different places, in non-focused contests.

The station-building mentoring needs to continue, and is a much different project. We need a way to get those wanting assistance together with those who can help.

Utilizing Club Stations:
After getting input from this group, and thinking about it, I feel it is still a potential big winner for the Club, but is not trivial to do properly.

I think the best way to approach it is to setup a list of op's looking for another station to operate in an upcoming contest. This would automatically imply that the needy op wanted to "go for it,"and do his best effort (whatever that is). And then, have that list available for those potential hosts to review, and then contact the op's and make arrangements.

This type of thing is most imposing on the host, and he should be the one most comfortable about inviting a new person into his home and station.

If guys are willing to put themselves on a potential host station list, that might work too.

It probably cannot make everyone happy, in every case, but by providing a platform for trying to put the right folks together, we could end up with something that is good for everyone and the Club.

Most Improved Contesters:
Here, I want to do something that will motivate about 50 of our members to get in there, try to double their scores, and get a recognition for it. My reading of posts to the reflector tells me there are plenty of guys who "didn't do very much, because they knew they could't do very much, and so they didn't."

I want them to compete with themselves to find the joy of doing more than they ever considered, and have more fun doing it.

Bouncing Back – Part One

Rob Brownstein, K6RB

On January 7, 2005 at precisely 11:15 AM (PST) my 50 foot crank-up tower with Force 12 C31-XR and MAG 240N yagis collapsed. After being hammered by oscillating winds of 50 mph for about half an hour, the wind suddenly kicked up to over 70 mph.

A small buckling in the second section near where it feeds into the bottom section precipitated the inexorable failure. In a matter of seconds, the upper two sections of tower, the mast, and the two antennas simply fell over and crashed into the ground. Now, after more than four months, a new tower and yagis are almost in place. Here's the story behind the story.

A Day of Reckoning

The afternoon of January 6 we had a forecast of heavy rain and wind for that evening and throughout the night. I had lowered the tower about a third of the way down to give it a shorter profile and more section interleaving. But the storm stalled over the Pacific and the morning of January 7, it was sunny with very light breezes. So, after taking my son to school at 8 AM, I cranked it back to full height around 9 AM. The bands were kind of quiet, so I decided to do some writing.

As I sat there, cranking out the copy, I noticed an occasional wind howl. But, I kept on working because I was on a roll. By 10 AM, the rain had started in earnest, and the wind began howling continuously. I walked the 70 feet over to the tower base and started trying to crank it down. No dice. The line went slack but the sections acted like they were glued together. I was reluctant to leave slack in the line because if the wind paused, the sections would literally fall down taking up the slack. I feared the cable might be damaged or break. So, I cranked in the slack and went back inside to wait until a more opportune time to lower the sections.

Unfortunately, the more opportune time never came. Instead of slowing down, the wind and rain picked up. Rainfall was being measured at over one inch per hour by 10:45 AM, and hammering winds of 50 mph were pounding the tower, mast and yagis. I stood watching as the top of the tower swayed more than a foot towards the north. Then, it snapped back to vertical. Another gust, and the tip pushed north, again. I ran downstairs and turned the antenna so that the boom rather than the elements were broadside to the wind. By this time, it was around 11 AM. Suddenly, the howling began to crescendo. I never remember hearing the wind scream the way it was right then.

I ran back upstairs to see if the change in direction had somewhat eased the pressure on the system. When I got to where I usually could see the mast and yagis, I couldn't see them. I walked further, and saw that now they were listing about 20 degrees from vertical. And, as I watched, another blast of wind seemed first to lift the system up a bit, then it folded over and crashed with a subdued thud.

Surveying the Damages

I put on a jacket and ran outside to make sure no one was hurt, and to assess the damage. The tower had come down across a 24-foot wide fire-truck access road and the top section, mast and yagis had hit ground in my neighbor's yard.

The tower had fallen across a fire-access road, and the yagis were resting in my neighbor's backyard.

Fortunately, no sane person was out in the weather, so no one was hurt. Also, fortunately, only a portion of the second

section had hit the top of my neighbor's wooden gate, splintering it. The mast and yagis had hit the ground and the yagis were reduced to an unrecognizable jumble of twisted aluminum.

Because of the angle at which it hit, the two yagis took the brunt of the impact. Interestingly, though, the rotator and mast emerged unscathed.

One of the linear-loaded elements of the MAG 240N was bent back at more than a 90-degree angle. The boom of the C31-XR had one-third of it snapped off with five of the seven ten-meter elements.

I stood there amazed at the transformation. Then, I realized I was soaking wet. I went back to the house and changed out of my wet clothes. Afterward, I called my neighbors. I got the answering machine because the kids were in school and the parents were at work, so I left a message. I then called my insurance agent.

Is it covered?

It took about five days before I finally heard back from the insurance claims adjuster. Apparently, the storm had caused extensive damage in my area and people had lost roofs and had cars smashed in by falling trees. In comparison, I considered myself pretty lucky. The claims adjuster was very nice and spent about 20 minutes asking me several questions. It all seemed very routine … until the last question. "Rob, the tower was attached to your house, right?"

"Well, actually, it was 65 feet away from my house."

"Oh, hmmm, well, it will most likely be considered a separate structure and therefore not be covered by your policy, I'm sorry to say."

"Oh, well," I said, with visions of thousands of dollars fading into oblivion.

I hung up the phone and took Floyd (my Shepherd/Collie mix) out for a walk. We walked under the bent over tower section, down the fire road, and passed the field and woods on both sides. About 20 minutes later, we returned, and as I unleashed him, I heard the telephone ringing. It was the insurance claims adjuster. "Rob, I may have some good news for you," he said. "I told my supervisor that it looked like your claim was not covered, and he asked me if the tower was mounted on a concrete pad."

"Oh, yes, absolutely," I said. "It's on a three-foot square by six-foot deep concrete footing."

"Oh, well, then, it is considered an extension of the dwelling and is covered minus only a thousand dollar deductible."

In the end, the insurance company sent me a large check. And, with that settlement, I had some options other than making do with my roof-mounted multi-band vertical and low-slung 80 meter dipole.

What next?

The old antenna system had served me very well. I had gain antennas on 10, 15, 20 and 40, plus an inverted vee for 80 and 160. My interests had been CW rag chewing and contesting, and that set up had been more than adequate. But, now, I wanted to have all nine bands covered, with gain antennas for the WARC bands, too.

I considered several configurations, including a pair of 4-element SteppIR yagis. Finally, I came up with what I believed would be the best compromise solution. Force 12 makes an antenna called the "5BA," which is a yagi array sharing a common 33-foot boom. It covers 20, 17, 15, 12, and 10, with gain on all five bands, and it has separate feedlines for 20, 17/15 and 12/10. With suitable passband filters, it would allow SO2R operation. Force 12 also makes the EF240/230 antenna, which has two, 2-el yagis sharing a 24-foot boom; one yagi, each, for 40 and 30 meters. Again, there are separate feed lines.

Lastly, Force 12 offers a shortened-dipole 80-meter rotary antenna – the Sigma 180S. The element is 54 feet long with a pair of 18 foot T-bars. The result is the electrical equivalent of a 72-foot element (so they say). Resonance is achieved using two base-loading coils on each element half, adjusted for the appropriate center frequency. A 1:1 SWR is achieved by loading the feedpoint with a hairpin to raise the impedance from about 16 ohms to 50 ohms. It is a high-Q antenna with 50 KHz bandwidths between 2:1 SWR points, but it would be up almost 90 feet, and rotatable!

Why the change?
With the previous antenna system, I had a single feedline going from the shack to the tower, and a tower-mounted antenna switch. The feedlines from the C31, MAG 240 and an inverted vee were connected to the switch. The tower-mounted antennas were not usable by two radios. To operate SO2R, I had a second radio connected to a multi-band vertical. This time, I wanted the tower-mounted antennas to be usable by two radios.

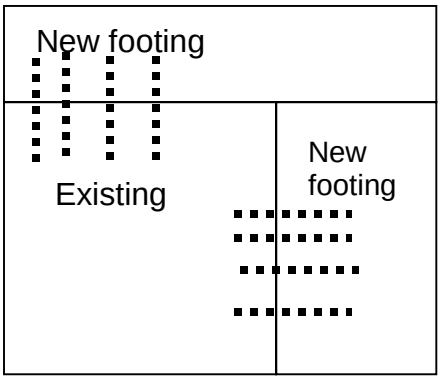
Instead of one feedline, I planned to have two of them. On the mast, just above the bottom antenna I planned to put two, 4-way antenna switches. One would have coax from a 160 m inverted vee, the 40 meter yagi, and the 17/15 meter yagi. The other switch would have coax from the 80 meter rotary, the 30 meter yagi, the 20 meter yagi, and 12/10 meter yagi. Seven switch positions on two switches would serve all nine bands.

The Plan
I wanted to put the new tower and yagis in the same place as the old antenna system. What's more, I wanted to make use of the existing 3x3x6-foot base. The new tower I selected is a 72-foot crank-up type with electric winch and positive pull-down. It requires a 5x5x6-foot base.

So, the first order of business was to determine if, in fact, I could reuse that smaller base. Steve, K7LXC, is the well-known sponsor of the "tower tech" reflector. He is also the one who helped me deal with the insurance company.

One week after the tower came down, Steve was here helping me cut up all the steel and aluminum and having it carted away. We sat down, afterward, and figured out that there was room to dig 2x5x6-foot and 2x3x6-foot trenches such that the existing base and the two trenches created a 5x5x6-foot base.

The tricky part would be binding the new concrete to the existing concrete. The game plan was to use rebar stubs between the old and new bases to bind them together.



Retrofitting The Base
Digging out the new trenches was a two-day effort. Enough earth had been removed to add about seven additional yards of concrete to the existing three yards. The total new base would have nearly 10 cubic yards.

After digging the trenches, we found that the underlying earth was very compacted. That would add even more insurance against tower uprooting.

The old tower footing is exposed aftger digging the new trenches. The earth is very compacted which gives the footing even more resistance against uprooting.

Using a heavy-duty drill and concrete bits, about a dozen holes were drilled horizontally in the face that would be joined to the largest slab of new concrete. Fewer holes were drilled in the other face. These were filled with rebar stubs.

Holes drilled in the open faces of the footing are filled with rebar stubs. These will provide strong binding between the old footing and the newly poured slabs.

In addition to the rebar, a new hole is drilled in the top of the old footing for one of the three new anchor bolts. About two-thirds of the way down, the bit bound up and we were unable to free it. That night, I came back out, with a large monkey wrench, and gradually freed it by applying clockwise and counter-clockwise torque.

The next morning the anchor bolt was fixed to the old footing with epoxy. The new tower T-base and the two other anchor bolts were then attached to the first anchor bolt. The two other bolts would be fixed into the newly poured concrete. In this way, we distributed the stresses on the new base plate between the old footing and the new slabs. Then, the excavated area was bordered by wooden forms to await the arrival of the concrete.

WIth one anchor bolt and one end of the base plate attached to the old footing, the other two bolts and the larger end will be sitting in the newly poured concrete.

Since the tower is adjacent to the fire-access road, the cement truck could pull right up to the site and pour. It took less than 30 minutes from start to clean up.

The retrofitted base was now ready for the arrival of the tower.

END OF PART ONE

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