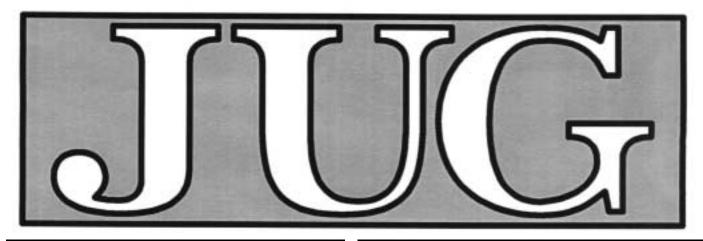
Dates

Dec 31



## **MEETING**

DATE: Monday, November 13, Tied House, San Jose 6:00 PM: Schmooze 6:30 PM: Dinner 7:00 PM: Meeting INFO & DIRECTIONS INSIDE

and you can always check:

http://www.nccc.cc/meetings.html

# NCCC OFFICERS

President ... Bob Wolbert, K6XX ... k6xx@arrl.net Vice President/CC ......

Ken Keeler, N6RO.... kenkeeler@jazznut.com

or n6ro@arrl.net

Secretary/Treasurer ....

Kit Kohlmoos, W6ISO....kmoos@pacbell.com Directors ....

Ed Schuller, K6CTA... k6cta@arrl.net
Andy Faber, AE6Y.... ae6y@aol.com
Rick Tavan, N6XI..... n6xi@arrl.net

Kurt Andress, K7NV... k7nv@contesting.com ARRL CAC member: Jim Pratt, N6IG...n6ig@arrl.net JUG Editor: George Daughters, K6GT...k6gt@arrl.net WEBmaster: Ed Muns, W0YK... w0yk@arrl.net

## The NCCC 75 meter net meets on Thursdays at 9PM, 3830kHz approximately

**November Contests** 

110 VCIIIDCI CUITCSIS	Dates
ARRL Sweepstakes Contest, CW	Nov 4 - 6
High Speed Club CW Contest	Nov 5
Japan Int. DX Contest, Phone	Nov 10 - 12
WAE DX Contest, RTTY	Nov 11 - 12
OK/OM DX Contest, CW	Nov 11 - 12
LZ DX Contest, CW	Nov 18 - 19
IARU Region 1 160m Contest, CW	Nov 18 - 19
LI/NJ-QRP Doghouse Operation Sprint	Nov 18
ARRL Sweepstakes Contest, SSB	Nov 18 - 20
RSGB 1.8 MHz Contest, CW	Nov 18 - 19
CQ Worldwide DX Contest, CW	Nov 25 - 26
2000 6m Activity Contest	Nov 28
<b>December Contests</b>	<b>Dates</b>
ARRL 160-Meter Contest	Dec 1 - 3
TARA RTTY Sprint	Dec 2 - 3
QRP ARCI Hol. Spirits Sprint	Dec 3
ARRL 10-Meter Contest	Dec 9 - 10
AGB Party Contest	Dec 15
OK DX RTTY Contest	Dec 16
Croatian CW Contest	Dec 16 - 17
DARC Christmas Contest	Dec 26
2000 6m Activity Contest	Dec 26
RAC Winter Contest	Dec 30

For a complete calendar, log submission details, and due dates visit:

Stew Perry Topband Challenge

http://www.hornucopia.com/contestcal/index.htm

# DOUBLE CROSS

## (Wolbert's Words/Dos Equis) CQP 2000

CRASH! That was the sound of old scoring records being broken during last month's CQP. My definition of heaven may not be operating CQP on a sunny northern California day at the peak of the sunspot cycle—but it certainly comes close! When else can a W6 work 1350 stations with medium power into low dipoles in only 20 hours?

Oh, if only the Yagi hadn't failed, I'd certainly have passed 2,000 Qs. Unlike the A's and Giants who must wait for "next year", for us contesters there is...

#### **SS 2000**

Sweepstakes is upon us. By my calculations, NCCC is presently in first place for gavel number 13, with a total of zero points. Of course, everyone else is presently tied with us. We're the guys that can hold onto first place, though!

## Why Does NCCC Focus on the Sweepstakes?

Some hams operate from a superstation and may actively compete to win contests outright. Many more are capable of competing on a regional basis. Most of us cannot muster the resources and skills necessary to earn awards. Enter the Club Competition. By joining a superior team, the victory that eludes the average station and operator individually is achieved as a group. Unfortunately, the scoring particulars of many contests, such as WPX, tilt a huge advantage toward DXpeditions; the average operator/station at home contributes only a tiny percentage of the club total. The club victory in these contests, while always sweet, is somewhat vicarious to the stay-at-home operator.

Not so with the Sweepstakes. Its unique format equalizes the playing field. A competitive club in the Sweepstakes must be located in a densely populated region, and the nearly equal playing field translates into a battle of the quantity of logs submitted. Of course, when the region is densely populated with the world's best radio operators (Northern California, for example...) the "equal playing field" is disrupted in their favor...

Northern California Contest Club, founded upon Sweepstakes participation, continues our proud record of success in the SS club competition this month. NCCC was the first, and remains the only, West Coast gavel winner in the heavyweight Unlimited category. Our natural competitiveness provides our group what we cannot realistically achieve individually; first place nationwide.

Before concluding that the competition is already decided, let me assure you it is not. Although our score in 1999 was our best in over a decade, it was not dominating. NCCC won by an incredibly slim margin: by the score of approximately ONE log. Every participating member may feel justifiably proud of the club's accomplishment, since it really was your log that decided the gavel. We won the last gavel of the 1900's by a margin of less than 1%. Winning the first gavel of the 2000's requires your active, both-modes participation.

One of the most enjoyable aspects of team contesting is the fact that a QSO between two NCCC members scores two for us and nothing for our competition. Plan on logging many such QSOs in SS 2000! Competition? What competition? With your help, we'll blow 'em away!

Don't forget: C U on 80m at 11PM Saturday nite! 73 de Bob. K6XX

# NOVEMBER MEETING

Guests are always welcome at the NCCC! Please join us! Members, don't forget the "Bring a friend" contest!

**Time**: 6pm schmoozing, 6:30pm order dinner, 7:00pm dinner, 7:30 meeting/program

Program: CQP lies & Sweepstakes preparations!
Location: San Jose Tied House restaurant located at 65 North San Pedro Street in San Jose.

Menu: The meal price is \$16 for: soup OR salad and your choice from 3 entrees; ½ Slab of Baby Back ribs smoked and smothered with BBQ sauce; Blackened Louisiana Catfish with rice and beans; or Grilled beer-mustard Chicken with rice and vegetables. The \$16 price includes beverage, taxes, and gratuity. Note!! This information is subject to change! (These data are from our last meeting at the San Jose Tied House.)

**Parking**: There is free parking after 6PM at the garage across San Pedro Street. We hope to see you there!

There is a map showing the location of the Tied House at their website... http://www.tiedhouse.com

The San Jose Tied House is in downtown San Jose, just a block away from Market Street and from Santa Clara Avenue.

# ALL THAT JAZZ!

#### **SWEEPSTAKES** is here!

At 1 PM on Saturday, Nov 4, the gun goes off starting the cw segment of ARRL SS. Our club leadership and volunteers have been hyping the event for the last two months, since the day the membership voted for SS to be the main operating event for NCCC in the fall season. Now we all need to our thing to win SS Gavel #13.

Although our email and telephone tree campaign has been encouraging, we still need participation from at least 50 more members who did not respond to our call for score pledges. As of this writing (Oct. 27), we have about 11 Million points pledged from 60 club members. We need at least 3 Million more points to have a chance of beating our archrival PVRC, or another large club who might be mounting a big club effort. That amounts to 50 entries with an average score of 60K, that's about 450 QSOs each. I'm now appealing to our "silent" club members to get on the air Nov 4-5, 18-19, and make our victory possible. At minimum, put some time in working fellow club members - that two for us, none for PVRC! Look for club members near 3550 cw, 3850 ssb at 07Z on the Saturday nights, and again in the last five minutes of the tests (0255Z.)

Assuming you are able to add to the club score, here are a few last minute ideas to aid your efforts. Before the contest (Thursday or Friday):

Click onto the NCCC members webpage and review the SS scores pledged to give you a feel for the numbers involved and NCCC callsigns to look for during the contest. Download and review the SS Handbook (by K6XX) and Propagation charts (by N6BV) for ideas to maximize your station and operating capabilities. Check out your station – radios and all antennas, set up your contest logging software. Practice with the software, or use simulators - PED, or the SS simulator in TRLog. Prepare a band plan to fit your available time and station capabilities. On request to n6ro@arrl.net, I can send you (Excel or 123 file by email) a blank form to use – it shows hours vs.

bands, and it will accumulate QSOs by band, total per hour and a cumulative total.

On the weekly Thursday night net on 75m (near 3830 at 9 PM) we will run mini SS contests for practice and logging software debugging: CW on Nov. 2 and maybe on the 3rd if there is demand for it; SSB on Nov 9 and 16. We'll share operating strategies and cover any topic requested. Mini tests will start 20-30 minutes after 9.

Another topic that we all need to focus on is logging accuracy! Our club score was reduced by approx. 8% last year due to logging inaccuracies. The main loss of points is wrong call sign – penalty shot! I won't get into the intricacies of the log checking program at ARRL; the bottom line means that you must take the time to get the info correctly into your log. Typos work against you, so check what you have typed in before hitting ENTER! This is the hardest issue I face in operating any contest – I must discipline myself to be patient and take the time to get the exchange right. If you're not sure, don't log the QSO; tell the other guy to try again later. Accuracy didn't matter that much ten years ago, now the log checking mechanism forces us to get it right, or not log it.

If a station calls you and your logging program sez he's a dupe, work him again and let the logging program credit the QSO accordingly. It takes too long to debate the subject of whether you or he got the first QSO right, log him again!

Check the club email reflector for last minute info, and preliminary cw results in between the cw and ssb weekend.

Go get 'em, let's win #13!

73, Ken, N6RO, VP/CC



Here is the S571W operating QTH, Mt. Slavnik, with the clear blue sky in the Southern part of Slovenia. Left to right: competitors Bob, N6TV, and Eric, K3NA; Kikko, S55TK; station host Adi, S55M; and Alberto, IV3TAN, the referee.

# A CQP SHORT STORY

Well, all is ok now. We had a couple of 50 amp circuit breakers blow up in the generator shed in a beautiful pyrotechnic display. When they went a voltage surge went through the amplifier taking it out too. It took about 6 hours for me to repair the damage to the generator on the CQP weekend, and another two hours last weekend to repair the linear amplifier. Luckily, I only had to replace diodes and disc ceramic capacitors in the power supply. The 3-1000z tube was ok! The good news is that we made over 800 contacts before the circuit breakers blew... and there were no forest fires or injuries. I was able to fix everything with some effort.

73, Ted, K6XN (KC6DX, Nevada County in CQP) P.S. We were able to save our CQP log... I was running CT on a battery operated laptop computer.

## And...

## A CQP DIARY

Or, a tale entitled:

"How to beat yourself to death in a weekend."

#### 10/6 Thursday afternoon:

Sneak out of work early to get home and pack the Jeep before it gets dark. The proper way to do this is to have made a list of those things one needs to bring on such a trip. In practice, one simply throws things into the car until it's completely full. Then try to think of what essential item was left out.

A partial list of what was taken (made up after the fact):

Radio: FT1000mp, TL922 (better take the FT920 as backup)  $\,$ 

Antennas: two spools of wire, 500ft each, 18 AWG, an A3S ... also a backup A3S; maybe I can deploy both? Two 50 ft TV masts (heavy duty) & 2000 ft of rope; one mast is for the 80/40 inv vee & the A3S; the other mast is for the 80 reflector; 12 guy stakes for the masts (2 ft, 1/2" dia bolts); 5 lb hammer for guy stakes.

Table

Chair (I forgot this until after the car was packed)
(It must have looked neat, tied to the top of the

load, "Beverly Hillbillies" style!... ed)
Generator, 2.5kW & fire extinguisher; special

Generator, 2.5kW & fire extinguisher; special 5gal gas can with a long gas feed line; another 5 gallon can of gas (make that one more... don't want to run out... so that's three 5 gallon gas cans... all leaking ever so slowly)

Orchard ladder, 10 ft

Coax: several pieces of RG-8 unknown lengths (100-200ft). Just in case, buy 1000ft spool of RG8X. Ya can't have too much coax!

UHF barrel connectors... oops don't have any !!! Ice chest (empty)

Tool box (full)

computer (lap top) + accessories

Keyer, key

Miscellaneous wires and cables (two boxes)

Sleeping bag, two changes of clothes, skip the toothbrush

By now, you get the idea! The Jeep is now packed to the point where the driver can barely squeeze in. TV masts, ladder, antennas on the roof. Suspension sags noticably.

### Friday morning, crack of dawn:

Think .. what did I forget? Stop by supermarket and buy junk food and three blocks of ice.

Wait until 9am for local electronics store to open in hopes of finding some UHF barrel connectors. Success! Buy their entire stock of 7 connectors.

9:30am hit the road. 150 miles of freeway then 10 miles of dirt road to the secret site. Arrive at 1:30pm.

The chosen site is on top of the world: north-south ridge in north-east Yolo county. No trees. Unfortunately the target direction is blocked by an equally high ridge. A notch right at 70 degrees is where I aimed the antennas.

Friday afternoon:

Work like hell to set up the first TV mast. Eventually the mast has the A3S as high as I can reach from the ladder, an 80/40 inverted vee at 50ft and a second 80 dipole at 45 ft, perpendicular to the first one. This is enough to get on the air.

Friday evening:

Set up tent and watch the sunset. Next start the generator and set up the station after dark. Yes!! I checked into the NCCC net on 3830 and heard reports that I'm the loudest guy. While checking the station out, discover the 40 dipole is nicely resonant at 6750 kHz and the 80 is resonant at 3450. Fix it in the morning. A3S working well. The brand new

WriteLog seems to be missing the voice keyer function

#### Saturday morning:

Get up at crack of dawn to fix dipoles. More difficult than it should be. Maybe the problem is due to not having the reflectors?? Spend 2 hrs putting up the second TV mast for the 80m reflector. resonant frequency doesn't change. Shorten the driven element by 3 ft each side puts it up to 3650. I was aiming at 3550, but its good enough. reflector isn't up and it's 8:50am... 10 min to start time! The 40m antenna is still resonant at 6750. Ignore it! turn on the rig and boot up the lap top.

9:07am: Start contest a few minutes late. S&P up the band until I find a hole and start CQing. For SSB, use the Windows WAVE player to send CQ recorded last year. Seems to work OK. Everything playing OK. TL922 only putting out about 600 watts on 10, 15 and 20. I hear W6PH ahead of me by only a few QSOs (last year he beat me by only 20 QSOs).

Sat afternoon: Temp is HOT... I forgot to bring the fan. I do reasonably well on the high bands, then get a super run going on 20 SSB. Rate meter goes over 220 and stays there for a while. After the run dies out I can't work anybody!! Five CQs per QSO. Move to 40 meters. Thank God the TL922 will load anything; SWR is 4:1 but still get 700 watts. Forty meters is OK, but not the super band I experienced last year. Eighty meters seems better. Sure is nice NOT to hear TCI cable crap. Maybe the reflector is working??? 1100 watts doesn't hurt. Now I hear W6PH and I'm ahead of him!!! Life is great. Blow past QSO #1000 and keep going. The Yolo county record is now mine. At midnight I pull the plug for a nice long 5 hour break.

#### Sunday morning:

I forgot to bring alarm clock. Get up at 6am. Check generator. Still have more than 10 gal of gas. Obviously I brought way too much. Boot the lap top: it fails! Something about a PCI mass storage error. Hard disk seems ok. I try various SETUP experiments all of which fail. I'm thinking about packing it in when it finally boots (under duress). At 8:30am I'm finally back on the air. Fifteen is hot and there are many signals on 10 already. Obviously I've missed some significant operating time. I can maintain a nice steady 70-90 rate, but nothing super except the sporadic pileups that give a very short term rate of 150. There are lots of Europeans... something quite rare for me.

Sunday afternoon: It's still HOT, but not as bad as yesterday. Good breeze blowing. Still can't seem to find the good rates, but it's not bad. VY1JA calls me on two bands with exceptional signal strength. Nice to hear VE1JX and a VE9 both calling me at the same time. Rate continues to drop. By 2pm I'm ready to quit. Only 1 QSO per 5 CQs. Guess I've worked everyone already? There's a LOT of work to do so I quit early and start tearing down the station. At 3:30pm I go to pull down the A3 and find it's now aimed due north! Wonder how long it's been like that?

Sunday evening: Hurry... lots to pack up. Toss the generator and still full gas can in the Jeep (total gas used was only 7 gal.) Drop the TV masts, coil up rope and coax... very time consuming. By the time the car is packed its already dark. Call the XYL and tell her I'm heading home. Jeep lights fail to turn on. Everything else is OK.

Moon is out, but it's still awfully dark. I try driving down the mountain anyway. After about a mile I give up; call home and let them know I'll be staying out another night. Even if I managed to drive down the mountain in the dark, I couldn't drive on the highways. Think... I'm an EE. I have a car load of tools and wire. I can fix this! After 1/2 hour I have the headlights hard wired to the battery.

The drive home was uneventful. Arrive home at midnight. Call in sick on Monday and spend the day unpacking everything and thinking about not doing this next year... of course, that's exactly what I said last year!

73, Al, AD6E

# **WOULDN'T YOU** LIKE TO BE A "U"?

(It doesn't hurt!)

There are three classes of operators in NCCC who will be fighting in their own ways to assure a National NCCC victory in SS:

1. THE GLADIATORS. Take no prisoners. Loners. Single purpose. Never take face from screen. Continue blood feud from last SS with bosom buddy in the club. Expect minimum 1500 Qs, maybe 1873 Qs even with terrible conditions. Maybe more. Been in training all year. Excellent techniques and equipment. Will make the big scores and carry NCCC to next champeenship. The winners all NCCCers would like to be. NCCC proud of all of 'em. Will make gigantic commitments for Qs.

- 2. THE SPEAR CARRIERS...Gladiators-in-training. Some day. The Majority. Not quite there yet. Or maybe been there --done that-- and sliding a bit. Need more/better antennas, rigs. Need better location. Need more experience. Need improved techniques. Want to make 500-1500 Qs. Probably will. Will go-go-go and try to do it all alone and find those elusive mults by him/herself. But --maybe-- could be induced to use packet to find those last remaining mults... as difficult as it may be to pride... to help the club effort. Will do very best and try very hard to make NCCC the winner. Whatever it takes. Will make big commitments. Probably up from last year.
- 3. THE GREAT UNWASHED... the "U's" (pronounced "Youse", like in Noo Yawk.) The rest of us. Gregarious. Wants to be part of a victory and will do best with what he/she has. Maybe no time available. Lousy location, rig, "honeydo" jobs. Not too much time sitting in front of rig. Maybe has piles, but wants very badly to contribute to club effort. Will enter as "U" category and use packet spotting to find those rare mults. Gung Ho in his/her way. Will battle to stay alert long enough to make at least 100 Qs and hope for up to 500... Or maybe a clean sweep. Wants that WAS-80 MUG in a big way. (Looking at the price this year, it must be platinum!) All out effort---for them.

Well, never worry about the Gladiators. They will be out there using all the trix they have learned over the years. They will do their thing and produce mindbending scores. We will all be in awe of their accomplishments. They do not need nor want outside help. They do it their way. They will make a huge, gigantic chunk of the total NCCC score.

But now to - the Spear Carriers and the Great Unwashed. The Happy Warriors. They are eager. They want to do well. They will eagerly watch packet for an announcement of that tough Section. Well, the Unwashed will anyway. And the Spear Carriers—maybe -- for the good of the club. Where is Yukon? Del? RI? SC? Me? WCF? etc. Or, toward the end, Spear Carriers will ask for spots for them rare Canadian Provinces. Or Newbraska. They already will work all the Qs they possibly can, so what they need is more mults, if they can find 'em they'll work 'em. And... they can help each other work 'em via packet.

This shows the importance of those Spear Carriers and Unwashed entering in the "U" category. Actually, unless an operator is a Gladiator or wants to be in the QRP category, he/she should consider going "U" and taking advantage of packet for the good of the club. (And, as the man said, if you have an amplifier, use it!)

Besides, what's wrong with being a "U"?? Gladiators will not go "U" because they have a different agenda. It's tradition amongst the Gladiators to fight each other fiercely without props. They are going to have great scores regardless... and also irregardless. But the rest of us can use props and aids... and that is where we will pick up those much needed small points. Like the small points it took to win last year's SS! By bringing up the scores of the Spear Carriers and Unwashed. What do you care if you have a "B" or a "U" after your call?? Maybe the "U" should be the Badge of Honor for helping NCCC! The important thing is that you read NCCC at the top of the Club Scores next year. Not whether you have a "B" or "U" after your call, which is buried amongst hundreds of other calls that nobody will read or remember! Somebody in North Dakota will not care whether you had a "B" or a "U", but they will see NCCC at the top of the heap!

Leave us all do our collective best with what we have and what our conscience will allow... no matter what category we choose. HOWSOMEVER - For the Good of the Klub... if you have no prior commitments or personal problems with using packet... Then SPEAR CARRIERS AND GREAT UNWASHED OF NCCC ... UNITE... UNDER THE BATTLE STANDARD OF THE "U". CHHHHAAAaarrrrjjjuhhh!!

73, W6ISQ

# RESULTS OF "QUICKIE" RIG SURVEY

A few weeks ago on the NCCC website, we asked the question why TenTec (TT) apparently was not used much by Contesters or DXers out west here. No less than 17 worthies responded, some a couple of times. And their replies were most interesting. Besides TT considerations, some writers offered their thoughts on what exciters they now use or have used. The amount of material received is too much to reprint, but bits and pieces of the correspondence should be of interest.

QUESTION: "Why is TT not as popular out here among contesters and DXers as back east. Or, if you had/have one, did you like it or not"?

Here are some quotes and paraphrases of the responses:

"TT sales are 'in house'; not sold in stores where customers can kick the dials and knobs"...

K6SV & AD6E

"It used to be that the knobs, etc. were cheap and tough to use"... N6BV

"Good electrical design, but do not like components and box. Had to repair a lot over the years. Knobs do not have the 'feel' of other boxes"...

NI6T

"Nothing against TT. Had TT 15 years. Basic OMNI design pretty old now and not sure it would be considered 'top end'"... K6CTA

"Have had OMNI 6+ for 2 years. Easy to use. Does all the computer logging I want. Great filters that don't ring. Resistant to intermod. Display easy to read"

AD6FX & N6NU

"Had TT long time ago. It was 'junque', but in recent years TT has reestablished itself"... W6CS "I used TT for years and loved it. Tried ICOM but to be honest, TT was better overall. I'm still thinking about OMNI 6+"... K6RB

"I used TT many years. Not now except for backup. Good selectivity, sensitivity and dynamic range. But broke frequently. Do you wonder why their service department has such a good reputation?"... AJ6V

"TT rigs feel like plastic toys compared to the JA rigs. Cases and knobs not well built."... N6TV "I use OMNI V and like it. Only one factory service in 10 years. Outstanding audio. CW distinctively sharp. Break in flawless"... N6ZFO

#### Comments on other rigs:

"I use IC-765. Do not like 1000MP on CW"...

N6BV

"I'll try 756PRO. It's next generation"... AE6Y
"Yaesu MP is the way to go"... W6RN

"Bought a Mark V. Big improvement over last model. Kenwood not state-of-the-art"... NH7A

"Come on into the 21st century. I am in pileups with Elecraft K2"... K6III

"If you want to be "knob challenged", look at the 1000MP"... W6CS

"I like ICOM 775 because easy to operate. Fewer buttons. Computer control easy. Split operation is common sense. 1000MP total confusion. Nothing seemed friendly"... W6ISO

"MP or Mark V has best receiver. If audio quality is more important, Kenwood rigs better. Stay away from TS-870 or 570. They have bad receivers"...

N6TV

General conclusion: TT's poorer past reputation amongst contesters and DXers probably still plagues the new TT rigs. But the users of the OMNI 6+ seem to be quite happy. It is probably a very good rig. It may be that not enough contesters or Dxers have ever heard or used one to give definitive judgement. Maybe it could be "try it...you'll like it".

Maybe some ops have JA brand loyalty. Once an op becomes used to the "look and feel" of a rig or manufacturer, they are reluctant to change. But TT may not be really the latest, updated, state-of-the-art rig compared to the JA rigs. The OMNI 6+ might be of more interest if sold though dealers.

The various popular JA rigs not problem free or universally loved. Most ops have some complaint about one or another of the recent JA offerings. This is the way it always has been! Most often mentioned is that new rigs are getting too complicated. Too many knobs, buttons, selections, too many filters and stuff to adjust and compute.

What happened to the art of listening harder for the tough ones? The head filter? Do you need a 60 cycle filter to "hold" a frequency and fend off screams that you have invaded someone's space? Well, ahhhhh... I guess maybe so.

This is fun! Ops like to know what the other fellas are using and what they think of what they've got and share info. There has been a great cry and hue to expand a bit on this. But first... there is SS. Concentrate on that (both modes!) and do the best you can with what you have. We'll chase the truth about rigs and roses later.

As Smitty, W6CS, says: "I still think the 1000 MP has knobs that are not attached to anything inside." 73, de W6ISQ



## NCCC 44 Toyon Terrace Danville, CA 94526

check us at:

http://www.cqp.org

http://www.nccc.cc

repeaters:

W6RGG/R 147.24 +

and 444.2 (PL107.2)

FIRST CLASS