

# Publication of the Northern California Contest Club

Contest Club

June 2002

**Issue 361** 

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

# **NCCC** Meeting

Guests are always welcome at the NCCC!

Please join us.

### **Program**

10 GHz Microwave Contesting Jeffery Pawlan WA6KBL

# Monday, 10 June 2002 TIBCO Building 2

3301 Hillview Ave, Palo Alto

Schmoozing @ 6:00 Pizza @ 6:30 Meeting @ 7:00

TIBCO Building 2 is at 3301 Hillview Ave., just down the street from the Porter Dr. building where we have met in the past. The street address may appear to be 3307, but all 4 buildings use the same driveway. Building 2 is the first building on the left. Use any open parking spaces.

### **NCCC OFFICERS**

Ken Anderson, K6TA k6ta@arrl.net

President Dave Curtis, N6NZ n6nz@arrl.net
Vice President/CC Bill Haddon, N6ZFO n6zfo@arrl.net
Secretary/Treasurer Rob Brownstein, K6RB k6rb@baymoon.com

WEBmaster
Directors

Ed Muns, W0YK w0yk@arrl.net
Rick Tavan, N6XI n6xi@arrl.net
John Fore, W6LD jfore@wsgr.com
Mike Shapiro, WA6O wa6o@qsl.net

The 50MHz and Up Group of N. Calif. has organized a picnic with a catered BBQ to be held on July 14. All members of the NCCC are invited to attend and may purchase tickets for the BBQ at the subsidized price of \$10 per person. If you want to attend, the payment and reservation must be received by the 50MHz and Up Group no later than June 30. Complete details are on the webpage <a href="http://www.50mhzandup.org/picnicpage.html">http://www.50mhzandup.org/picnicpage.html</a> You can also contact Jeffrey Pawlan, WA6KBL, at jpawlan@pawlan.com

There will be several operational portable microwave stations at the picnic in case you want to make a few contacts and meet microwave contesters.

# Highlight of the June Meeting Program

Introduction to Portable Microwave Operating and the ARRL 10GHz and Up Contest by Jeffrey Pawlan, WA6KBL

Quite unlike anything you have experienced on HF and VHF, microwave operation and contesting is very dependent on the quality of the station, the terrain, and precision coordination among the contesters. This will be an in depth look at microwave operation starting with building the station and culminating in strategies for accumulating large scores in the ARRL contest. Since the antenna gain is frequently more than 30dB, the pointing accuracy of less than 5 degrees is a very serious problem. You will see how we coordinate on UHF repeaters and utilize GPS receivers, microwave beacons, and even the sun's position to accurately point our antennas. QSOs are either SSB or CW and operator skill is needed when the signal path may include a bounce off of an airliner hundreds of miles away.

There will be opportunities to participate in the contest using borrowed rigs or partnering with other contesters. Even if you don't want to participate, this is going to be a very interesting program on a contest topic that has never before been presented at any contest club in the country as far as we know.

### UPDATE!!!!!

In April Don, AA5AU was kind enough to write an article regarding RTTY contesting for NCCC and those interested might want to check out the slides from his Dayton talk.

http://aa5au.com/so2r/aa5au\_so2r\_files/frame.htm

# Dave's Wave's



### **May Meeting Highlights**

The May meeting at the Mountain View Tied House had a number of noteworthy happenings. We voted in Jim Fey, KO6UW/JT1FDA. Welcome, Jim! wasted no time in producing scores for the club -- he got right at it as part of the NT6K WPX CW multi/ multi. Trey N5KO gave us a two presentations for the price of one: 1) An excellent report on the very successful 2002 WPX Phone operation from HC8N -Wow! What a station. It's constantly growing and it was great fun to see an update. 2) A sneak preview of 9V1YC's video of the VP8THU DX-Pedition. This came complete with high-tech special effects: theatreseat motion to simulate the feel of the Zodiak rolling in the waves. But Trey, how did you get Ron to wire the Tied House for that? I know that rumors of a simultaneous earthquake are merely modesty on your part.

We also had a discussion of selecting focus contests for the coming year. Thank you all for your comments. Your thoughts are key inputs in setting the club's agenda.

# Thanks for a great WPX CW!

WPX CW reports are starting to flood the reflector as I finish off this column. Congratulations on some big scores! Thanks to everyone who put on a big effort, and also to those who got on with a targeted effort to work a few of the club members. Also, I think a follow up report from N6EM on the motivational influence of lighting a fire under the operator's tail is in order, along with technical details of how to adjust the space heater explosion for maximum QSO rate.

# **Field Day**

At the May meeting, an NCCC FD at K6ZM was proposed. Some folks were concerned that this would detract from our efforts to go to other clubs' Field Day operations where we can demonstrate good contest operating and also recruit new NCCC members. Also, there are quite a few members that are already committed to FD operations at other clubs to do

just that. A quick poll on the reflector has so far yielded only two serious operators and three more "socializers". There are still a couple more days to go before the poll deadline when the BOD will make a call on a K6ZM field day, but the early returns don't warrant having the event.

Going to other club's FD operations is a great way to identify new potential members for the club. Contesters often cite Field Day as the event that planted the contest bug. If every NCCC'er took the goal to identify one FD operator as a potential recruit, and make sure that person gets an invitation to come to a club meeting, we could have a bumper crop of members. A great idea from Rick N6XI is to print a few pages from the NCCC web site and take them along with some copies of the Jug to use as "marketing collateral". Combine that with the natural charm and friendliness of the average NCCC'er and we can't help but get recruits.

# **Announcing the NCCC Speakers' Bureau**

While we are on the topic of recruiting, let me take this opportunity to announce the formation of the NCCC Speakers' Bureau. The idea is to have a list of NCCC members who are willing to go to local clubs to give an "Introduction to Contesting" presentation. We already have a great set of PowerPoint foils – speakers need only to stand and deliver. What the club gets from this are:

- 1. More people operating contests. (Bigger scores for you!)
- 2. More people joining NCCC as awareness spreads of what fun people we are.
- 3. More favorable view towards contesters by noncontesters.
- 4. Eventually: Get back the SS gavel! Yeah! (The long-term agenda.)

Yes, winning back the gavel is a key motivation for the Speakers' Bureau. To regain our rightful place at the top of the SS listings, we need more logs, and to get more logs we need more members. The intent of the Speakers' Bureau is to showcase contesting in a positive light and to make sure that everyone in NCCC territory knows about us and knows that they are welcome in the NCCC.

Becoming an NCCC speaker is a quick and easy route to fame, prestige, and glory. Enthusiasm is the only requirement. Please send me e-mail if you would like to sign up as a speaker. Be sure to note the geography that you are willing to cover.

### **June Meeting**

For June, we have something a little different on the agenda. We'll learn about 10 GHz and up microwave contesting from Jeffery Pawlan WA6KBL. Here is a chance to get a view into a whole different world of radio contesting.

### **July MLDXCC Joint Meeting**

Be sure to mark Saturday, July 20 on your calendar for the joint meeting with the Mother Lode DX and

Contest Club. This is a potluck picnic in Jackson – see separate announcement. Al AD6E will be presenting the TI9M DX-Pedition. The joint meeting is always a lot of fun and a great excuse for a road trip to the Sierra foothills.

### End of an era?

It looks like Agilent (use to be HP) building 50 meetings are now just a memory for NCCC'ers. New security policies make it impossible for outside groups to use the facility. Too bad, it is a nice venue. I would like to find a good replacement location for South Bay meetings. If you have suggestions, please e-mail me at n6nz@arrl.net.

73, Dave N6NZ

# **Contest Calendar for June 2002**

Compiled by N6ZFO

Events of particular NCCC interest in bold.

HF Contests					
Contest	Start time	Date	End tin	ne Date	Ref, www
WW South America CW Contest	0000Z	June 1	1600Z	June 2	arrl.org
RSGB Jubilee Contest(CW/SSB)	1100Z	June 8	1000Z	June 9	rsgbhfcc.org
KIDS DAY(Boring ARC)	1800-2400Z	June 15			arrl.org
West Virginia QSO Party	1600Z	June 15	0200Z	June 16	qsl.net/wvarrl
All Asian DX Contest, CW	0000Z	June 15	2400Z	June 16	jarl.or.jp
ARRL FIELD DAY	1800Z	June 22	<b>2100Z</b>	June 23	
RAC Canada Day Contest	0000Z	July 1	2359Z	July 1	
50 MHz and Above					
ARRL June VHF QSO Party	1800Z	June 8	0300Z	June 10	arrl.org
SMIRK QSO Party (6 Meters)	0000Z	June 15	2400Z	15-Jun	smirk.org
Log due Dates for June, early Ju	dy				
NEQP		June 4		l	ogs@neqp.org
WPX CW		July 1		Cabrillo: w	pxcw@kkn.net
		non-cabrillo: n8bjq@erinet.com			
Sources: ARRL and WA7BNM w	eb sites.				

# **MLDXCC/NCCC Joint Meeting**

# July meeting will be Saturday, July 20, at 12 noon in Jackson. CA.

This is a joint meeting with the Mother Lode DX/Contest Club (MLDX/CC) and the Northern California Contest Club (NCCC), our 4<sup>th</sup> annual. Al Maenchen, AD6E, will have a program about the recent TI9M expedition to Cocos Island.

The meeting will be a **barbecue and potluck.** Grilled chicken breasts and beef tri-tip, condiments, buns and plates/eating utensils will be provided by the MLDX/CC. NCCC will provide soft drinks and other non-alcoholic beverages. **Please bring the following to share based on the first letter of the <u>suffix</u> of your call sign, and serving utensils, if necessary:** 

A-G- Simple desserts (cookies, fresh fruit, etc.)

H-N- Chips/dips/salsa

O-U- Salads (potato, macaroni, fruit, green, etc.)

V-Z- Relishes (assorted pickles, olives, carrot & celery sticks, veggies with dip, etc.)

Talk in on Amador County ARC repeater, **K6ARC**, **146.835** –**600** kHz. (**100** hz. PL, if in use). Alternates; W6SF, 146.165 +600 or 146.52.

Jackson is located at the intersection of State Highway 88 and 49 in Amador County, southeast of Sacramento.

### **Directions:**

The meeting will be at the **Senior Services Center, 229 New York Ranch Road, Jackson, Ca.** Take State Highways 49/88 to Jackson. From the West (Highway 88) or the North (Highway 49), go through the traffic light at 49/88 intersection and proceed to the bottom of the hill, turn left at the 2<sup>nd</sup> stop sign (Safeway and Chevron gas station will be on your right), onto Highway 88 East toward Lake Tahoe. Follow signs to Senior Center and turn left onto Court Street (approximately 1 mile). New York Rand Road will be the first stop sign (1/4 mile). Turn right and the Senior Center will be on the left approximately 100 yards from the intersection and behind an apartment complex (signs will direct you to "Oak Manor"). Parking is available in both the front and the

back. Additional parking is available next door at the Quail Hollow Professional Center with stairs at the rear that lead to the Senior Center. Please <u>do not park</u> in the spots marked for the Oak Manor Convalescent Home.

In addition to the Safeway mentioned above, if you continue South through the stop at 49/88, there will be a Ralph's on the right (1/4 mile) and a Raley's on the right (1 mile).

**To Jackson from the Bay Area** – take Interstate 580 East to Interstate 205 (bypass Tracy) and proceed to I 5 north. Proceed north to Stockton and take Highway 4 east to Highway 99 north. Proceed north approximately 1 mile and take Highway 88 east to Jackson.

**To Jackson from Nevada** – Take Interstate 80 or State Highway 50 West to Highway 49 and proceed south to Jackson. Or take CA/NV Highway 395 south to Highway 88 west to Jackson and turn right on Court Street.

**To Jackson from the North or Sacramento** – Take Highway 16 (Jackson Rd) east to Highway 49 and go south.

**From the South** – Take Highway 99 North to Highway 88 east to Jackson.

Amador County is in the heart of the Mother Lode Gold Country. Our meeting location will be minutes from antique shops galore, 18 wineries, gold mine tours, camping and fishing sites, and the historic Chaw'se Indian Grinding Rock State Park. In addition, the Jackson Rancheria Casino/Hotel is a jaunt up New York Ranch Rd.

For additional information contact:

Kay or Ken, <u>K6KO-k6ko@arrl.net</u> <u>K6TA-k6ta@arrl.net</u> (phone 209-2965577)

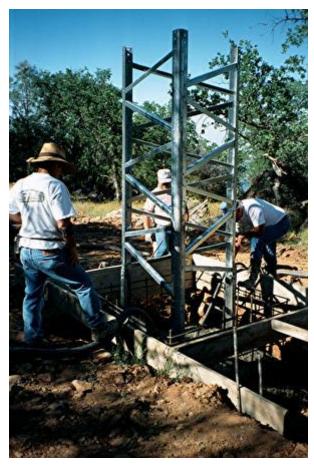
Dick, K6LRN <u>k6lrn@arrl.net</u> (phone 530-620-2147)

This is always a fun event-plan to be there!!

# And what did you do on YOUR summer vacation....Actual, un-retouched photos of tower construction at the N6NZ Mt. Bullion QTH



What do you do when the backhoe is half way to spec depth and hits solid rock that, in the opinion of the backhoe operator, "goes half way to China"? The silly thing to do is spend \$1200 blasting it out so that you can fill the hole up again with concrete. But, if you are deep enough to clear the stub legs, you drill into the rock and use rock epoxy to cement in some rebar. The rebar is just visible in this photo, to the left of "the shadow".



Fill'er up! This is a different tower, with a more "traditional" hole. Because the soil is rocky, the hole is a bit over dug from picking out boulders. The spec calls for 7.5 yards, this hole probably ate 12 yards.



Concrete pumps are truly slick machines! Here is the business end. It pumps mud through a two inch hose.



Topping off the tower rebar-ed into the rock. You can see a stream of concrete coming out of the hose.

# The 2002 NEQP - Wrap-up, Analysis and Prognosis

by Bill Haddon, N6ZFO VPCC

The inaugural New England QSO Party took place on May 4-5 making a resounding thump or whimper on the amateur HF bands, depending on your point of view. Interestingly, of the twenty or so NCCC contesters who partic ipated, many felt the event was relatively successful, but others perceived it to be a rather boring, maybe even worthy of the clever moniker "New England QSO Paucity". Probably there's truth in both opinions. In any case, thanks to the twenty or so contesters who took a chance on this contest and to the BOD, especially Dave, N6ZZ, for supporting a club effort. Notable multi-op contributions by KA6BIM and NT6K, and the W6YK gang represented by Dean, N6DE, with W6LD, N7MH, K6ENT, W7SW pitching in made astounding efforts, along with single op partic ipation by K6RB, K6III, AE6Y, N6ZFO, NA6E, N6EM, N6XI, N6RO, AD6E, W6ZZZ, W1SRD/6, K6CTA and no doubt a few others I've skipped.

Sadly, it appears none of will be munching on lobster, the sort-of grand prize for NEQP. However, some of you can hope for Ben and Jerry's IC, or if you are really lucky, maple syrup. NEQP definitely gets a vote for the most food-oriented contest in ham radio. Are we seeing a similarity to a certain other QSO party here? Most notable among the several NEQP plaques is the one sponsored by NCCC for the top CA/NV score. Altruistic, you say. . yes, definitely. It's a good thing K6ZZ resides in AZ. Thanks to N6XI, AD6E, N6ZFO, and the club treasury for kicking in a few bucks to sponsor it.

As you may have noticed, part of my VPCC "theme" this year is coalition building, in the belief that competitors can also cooperate and have a little fun in the process. In that vein, note the proposed NEQP/CQP competition that's described below.

In summary, I was very pleased with the NCCC turnout remembering that the goal here was to give NEQP support, hoping for reciprocation in CQP. For this reason if for no other, please send in your logs prior to the June 4 deadline. Cabrillo is encouraged, but not required; logs to logs@neqp.org. Details are at www.neqp.org. Note there is no club competition outside NE, but I hope that those who submit logs will note NCCC in the summary information -- it's good politics and good for NCCC to do that. And I want to specially thank Al, AD6E for supporting our "incursion into NEQP" and, as noted above, Dave, N6NZ, for jumping in with an enthusiastic presidential endorsement.

### **NCCC Scores and Analysis**

It may be tempting to compare our NEQP experience with CQP, but that's probably not the right way around. We're 3000 mi. away in this one, and more importantly we're the chasers rather than the chased.

That having been said, I thought it would be interesting to contrast NEQP with CQP by looking at the number of the New England logs for CQP vs. our logs for NEQP. Here's the comparison of # Q's for the higher scoring stations in both contests:

W1's in CQP (>100 Q's):

HP NB1B 891; KK1L 671; NY1S 463; WA1FCN 170 LP N1TT 357; K1HT 277; K1IB 186

NCCC W6's in NEQP (>100 Q's):

HP W6YX 393; KA6BIM 324; K6RB 213; K6III 144 LP N6ZFO 249 AE6Y 128.

So the top high power stations (W6YX and KA6BIM) got almost half the Q's that the New Englander's reported for CQP, and one of our low power entrants, N6ZFO, got about 75% of the highest LP entry into CQP from NE.

While some participants felt there weren't enough stations to work, that actually wasn't the case from this perspective. In fact, these results suggests that the turn-out for the first NEQP may have been spectacular, given that the six NE states have only about 6% of the U. S. ham population, whereas CA has about 15% i.e. the base for CA is, in theory, almost three times as big as in New England. Also NEQP is shorter, and had a poor distribution of hours, essentially eliminating 80 and 160m for all but near-by stations. But what these guys did accomplish was to turn a dying group of state QSO parties into an at least relatively successful event. In 1958, I won the Vermont QSO party for CA, making the huge total of 6 Q's; there was one other entrant from CA. The accompanying letter noted that after the paucity of activity, they just gave up and would not hold any more Vt. QSO parties.

### **Prognosis for NEOP**

If NEQP continues into the contesting future, we'll be asking the organizers to incorporate some changes to increase the competitiveness of left-coast contesters. One serious problem with NEQP is the split sessions, which sent NEQP into pause mode at 2000 PDST (0300Z) on Saturday night, just as 40m begin to come into its own. That

planning error would get more serious as the higher bands fade out in future years. Ten meters really salvaged NEQP this year for those on the West Coast. The other major complaint was a confusing dual county abbreviation system (3 letters plus state or 4 letters), a problem noted both by NCCC participants and by a number of respondents on the 3830 reflector.

### The NEQP-CQP Challenge

Believing in jumping into these things full force, and with reasonable concurrence from the BOD, I made a proposal to Tom, K1KI, for a yearly CQP-NEQP competition. The proclamation is shown below. The essence of the challenge is to base a portion of the competition points on the mere sizes of the respective QSO parties, but to also allocate a substantial portion of the score to the extent of participation in the *opposite* QSO Party. That is, NCCC members get points by participating in NEQP and YCCC member get competition points by participating in our CQP. So in effect, the clubs are rewarded both for the success of their individual events, but also to the extent that they support the "opposite" QSO party. The size of the QSO parties might be measured by the number of different calls detected in the logs or the number of logs submitted

with details to be worked out later. Well, the proclamation met with resounding enthusiasm. Tom, K1KI, who coorganized NEQP with Bob W1RH (and others) asked Chris Terkla, YCCC president, to work out details with us.

In his reply, Chris made a suggestion in honor of their esteemed former President, our own Dean, N6BV, suggesting that Dean be declared the official referee of the NCCC -YCCC competition. Quoting Chris' e-mail:

"I think there is only one stipulation that we may need to consider...I think the Dean N6BV is a member of your club, as you may be aware he is a past president of our club as well. I think we should spoof it up a little and have him be the referee or something...winner gets a free consult for their new antennas or something [:-)] maybe have the 'trophy' be the N6BV trophy...it could move back and forth from coast to coast like he does!

73 Chris N1XS"

So, there you have it. We'll see where all this goes in the coming year. Stay tuned.

# Proclamation-April 30,2002

Whereas, the competitive spirit reigns in amateur radio contesting,

and

Whereas, healthy competition is good for radio contesting and for the greater good of amateur radio,

and

Whereas the hams of New England have proposed in the year 2002 to initiate a glorious and comprehensive radiosport competition to be known as the "New England QSO Party"

and, furthermore,

Recognizing a certain similarity between NEQP and the famous and illustrious California QSO Party, known far and wide as the CQP,

The Northern California Contest Club, NCCC, sponsoring organization of the CQP, represented by its Board of Directors and membership,

hereby

**Proposes** that the Yankee Clipper Contest Club, sponsors of NEQP and the Northern Calfifornia Contest Club, sponsors of CQP, engage in a yearly

# **NEQP-CQP Competition**

# **NCCC Roving Reporter**

The NCCC roving reporter has found the location of the NCCC board of directors (BOD) meetings. The cite has been discovered and monitored for content. No doubt many members have wondered where these secret clandestine meetings are actually held, or if they are held at all. The RR now reports that our creative BOD actually declared itself a Beta Test Site for the 137 KHZ amateur band, and now holds its meeting in this formerly secret location. Now reception on this band is difficult at best, even using ground-based spherical antennas of the type shown in last month's RR interview with K6UM, so the following reports could contain minor errors and inconsistencies.

NCCC Dues to increase from \$24.00 to \$437.27. Reeling from an bone crunching 40 million point loss to SMC in the 2001 ARRL Sweepstakes, {or was that 4,000,000? (QRN)}, the BOD seems to have decided that NCCC might do better in the medium-sized SS entry category. Unfortunately the ARRL contest police are one step ahead, having passed a silly rule that a club can't just submit selected high scores in a lower class. No problem. Raise those dues, and cut membership. Calculations by the number-crunching VPCC have determined that a \$437.27 dues figure will reduce club membership to a Medium-classqualifying 73 members. Assuming exactly 69.8630341 percent of these folks submit one log, NCCC will clearly win the Medium Club SS competition, having taken a clever end-run around the SMC. The BOD is so confident of victory that SS Champ ions 2003 Beer Glasses are being printed as we speak. Unfortunately BOD signals faded into noise just as the vote took place, so outcome of the acutal vote is uncertain at this time.

IPA Contest to Replace ARRL Sweepstakes as NCCC's Major Contesting Event. Noting the great enthusiasm for meetings held at the famous Tied House, and recognizing that there's an IPA Radio Contest held in late spring, the NCCC BOD decided the IPA contest would make an ideal replacement event for the ARRL SS. Enthusiasm for this idea grew rapidly as board members realized that the old SS KB awards could be replaced by DB --Drink Beer --Awards. Thus instead of receiving those dumb old plaques year after year, which just clutter the walls of the members' shacks, kegs of IPA would be offered as participation incentive awards, thereby inducing contesters to go for the max in the IPA Contest.



Unfortunately, this discussion was halted when one BOD member, obviously a spoil sport, noted that the IPA contest has nothing whatsoever to do with India Pale Ale, but is rather the International Police Association contest. Too bad. Looks like the membership will be stuck with more of those plaques.

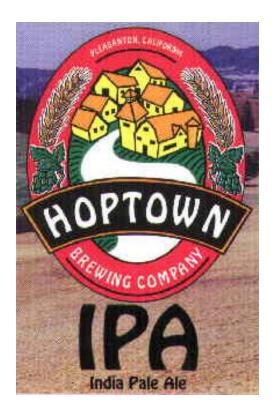
# Member Responds to BOD policy to "light a fire under those contesters".

Lamenting the perennially low percentage of participation in important radio contests, the BOD adopted the policy to "light a fire under those lazy contesters". The NCCC Roving Reporter hereby nominates Jack, N6EM as NCCC Contester of the Year for his timely and enthusiastic response to this new board policy during the recent WPX CW contest. Quoting from Jack's e-mail to the NCCC reflector:

"Comments: Murphy really struck home on this contest. My rotor failed just before start and it ended up facing straight South of ZL--worst possible place to be stuck.

Then early Sunday AM my space heater exploded and started a fire in radio room which I luckily put out immediately as it was right behind me. . . (snip) . . . 73 jack n6em"

So that's it for now for the NCCC Roving Reporter, signing off, possibly, and perhaps hopefully, never to return to the pages of the JUG.



# The NCCC Newbie

This is fantastic!

### **New Log Checking Reports for ARRL Contests**

The ARRL Log Checking Reports (LCRs) are available for selected ARRL contests. These reports provide you an individualized and comprehensive error analysis of your contest entry. The first contests with LCRs are the 2001 ARRL November CW and Phone Sweepstakes. These reports are FREE if you are an ARRL member.

### Reports Available via US Mail

ARRL members may request their LCR free of charge by sending a request and an SASE to "LCR Request, ARRL, Contesting Branch, 225 Main St, Newington, CT 06111".

For each request, include the contest name and year as well as your call sign. If you were a guest operator at another station or part of a multi-operator entry, your call sign must appear as an operator in the contest log that was submitted. Remember that the Phone and CW weekends of the ARRL November Sweepstakes count as separate events.

Non-ARRL members may obtain their LCR by mailing a request along with \$3 and an SASE for each event.

### Reports Available via the Web

The Log Checking Reports (LCRs) are available on the web in the ARRL "members only" section. Go to the ARRL Contest Results at www.arrl.org/contests/results/. Each contest has links to six items. If you submitted a contest entry to ARRL using your call sign then clicking on the "Log-checking reports" link will automatically bring up your reports.

Here is the web entry for the ARRL November CW Sweepstakes:

You can go directly to your LCRs at http://www.arrl.org/members-only/contests/lcr.html.

These details are from:

www.arrl.org/news/stories/2002/05/13/100/.

For more information, contact Dan Henderson via e-mail at "contests@arrl.org" or by telephone at 860-594-0232.

- 73, Marc, W6ZZZ

- the NCCC Newbie

USE THIS FORM TO PAY DUES FOR 2002 – 2003					
Name:	Full Members	X \$24			
Address:	Family Members	X \$12			
	Associate/Student	X \$12			
Email:	Donation to General Fund	\$			
Home phone:	Donation to Repeater Fund	\$			
Work phone:	TOTAL enclosed	\$			
I'd like to get my JUG at the NCCC website each month, and	donate the savings to the	e general fund!			
Please complete and send/bring with payment to: Robert S Brownstein 3881 Winkle Avenue Santa Cruz, CA 95065					

# 12 Store Buying Power!





### YAESU FT-817 5W HF/VHF/UHF TCVR Price: \$769.95

Coupon/special: \$150.00 Your Final Cost: \$619.95

### YAESU FT-1000MPMKVFIELD

 $100 \mathrm{W}$  TCVR AC/DC W BUILTIN PS

Price: \$2399.95

Coupon/special: \$400.00 Your Final Cost: \$1999.95





### YAESU FT-1000MP MK V

 $200W\ DSP\ TCVR\ W/\ PWR\ SUPPLY$ 

Price: \$3099.95

Coupon/special: \$550.00 Your Final Cost: \$2549.95

ANAHEIM, CA (714) 533-7373 (800) 854-6846 Janet, KL7MF, Mgr. anabelm@hamradis.com BURBANK, CA 2492 W. Victory Bt., 91506 (816) 842-1786 (800) 854-6046 Eric, KASHT, Mgc. Victory Blvd. at Buena Vista 1 ml. west 1-5 burbank@hammadis.com DAKLAND, CA 2210 Livingston St., 94606 (510) 534-5757 Mark, WITYN, Mgr. 1-680 at 23rd Ave. ramp sakland@tiamradio.com SAN DIEGO, CA 5375 Keenty Wile Rd., 92123 (858) 560-4900 (800) 854-6646 Toin, KMSK, Mgr. Hwy 163 & Claremost Mesa saedlege@hamradio.com SUNNYVALE, CA 510 Lawrence Exp. #102 94085 (408) 735-9496 (800) 854-6646 Ken, K1ZKM, Mgr. So. from Hwy, 101 sunnyvale@harmadia.com

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

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