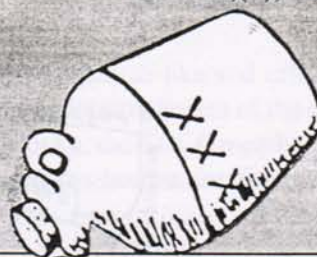


# NCCC JG

Club Repeaters W6RGG/R  
147.24,(+), 444.200 (107.2 PL)



de President, WM2C

## Ken's Pen

I was just up in Tomales Bay this past weekend trying to beat the heat, and the last thing I wanted to think about was contesting. I said to myself - wrong! This is definitely the time to start thinking about the upcoming contest season. It's just a short 7 weeks away, and we all know we start off the season with our very own CQP! If you are planning a county expedition, now would be a great time to take an exploratory run. N6TV has again volunteered to be our county coordinator, and he'll be glad to help you with some expedition ideas.



County expeditions do more than just help the overall success of the CQP. They are a chance for you to be a rare multiplier, and thus generate a pile up! The skills you obtain from a county expedition will also be the building blocks for your first DX-Pedition! The planning process of a CQP expedition is very similar to that of a contest-expedition in some far away land. Either on a mountain top, or on some uninhabited island, you have what you bring. You do your best, and you excel with what you have under difficult conditions.

With the contest season just a few short weekends away, it's also time to be out in the yard improving your antennas (while getting a tan to boot). You can bet that this year, the 160-20m bands will be as crowded as ever, and we need to do everything to improve our signal to stay competitive.

Lets not put off an antenna project that can be done today! There has recently been a lot of discussion on CQ-Contest about triband antennas, and how they stack up to each other. I think the best part of the discussion was regarding the degradation of antennas over time. We often forget about this, but time does take it's toll on antennas. A new coax run, and a tightening of all the nuts and bolts will help keep you as competitive as ever.

On a following page, you will read an interesting proposal regarding the WRTC. I urge you to read it, and give it some serious thought. I also urge you to rally behind AA6KX for this endeavor. This looks like a great opportunity, but it will require a lot of work by a large and dedicated group of people (This is what the NCCC is famous for!). I know this will be the hot topic at the NCCC picnic. I hope to see you all there!

Kenny WM2C

## Contest Calendar de K2MM

August 12-13		
New Mexico Chili Chase		QST Jul p.114
Maryland-DC QSO Party		QST Jul p.114
August 19-20		
Wkd All Europe DX, CW		QST Aug p.119
10-GHz Cumulative		QST Jul p.115
Keymans Club of Japan, CW		QST Jul p.115
New Jersey QSO Party		QST Jul p.115
NA QSO Party, Phone		QST Jul p.114
SARTG WW RTTY		QST Jul p.115
SEANET '95, Phone		CQ Jun
August 26-27		
Summer QRP Party		QST Aug p.119
West Virginia QSO Party		QST Aug p.119
September 2-3		
All Asian DX, Phone		
Bulgarian DX		
Radio Club of Panama		
September 2-10		
HP Maxim B'day Party		
September 9-10		
NA Sprint, CW		
VHF QSO Party		QST Aug p.117

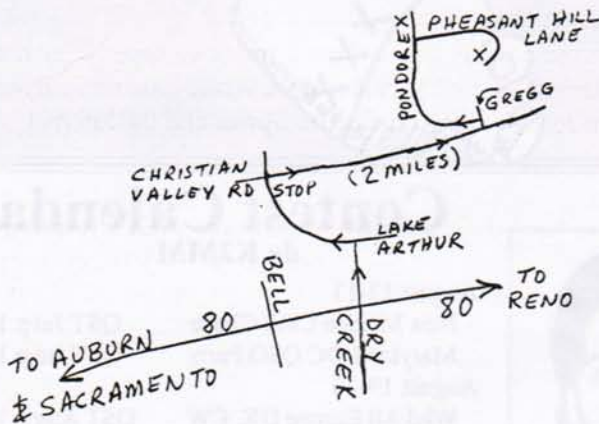
See CONTESTS page3

## Next Meeting:

Saturday, August 19  
Our Summer Potluck Picnic  
Noon to 5 p.m.  
WIFEA's Hilltop Spread  
2040 Pleasant Hill Lane, Auburn  
Talk-in Frequency: 146.50

This is a fun event for family, friends, and potential new members. This get together always has a large turnout, and for some, it is the only club meeting they can make! Lets all converge on Jack's place and show our support for the NCCC! This year we will be having a show-n-tell, so please bring up your latest radio goodies so the gang can see what's new on the market!

## Directions and Map for Next Meeting



## Last Meeting

If you missed the last meeting, you missed a great presentation! The show was on how Dave, Barara, Rich and Trey went down to the Galapagos to move and rebuild their famous contest station. Setting up a contest station on a remote speck of land, 600 miles from anyplace, was an obvious challenge. For example, their 80' tower was made on the island with the only available material: rebar! Dave said you had to watch out while climbing the tower, as one of the steps might have rusted out. All of us went away with a much greater appreciation on what it takes to develop a successful and winning contest station, especially triumphing over harsh conditions.

### The Northern California Contest Club

President, Ken Silverman, WM2C  
Vice-Pres/Contest Chr, John Zapisek, K2MM  
Sec/Treas, George Daughters, AB6YL,  
Directors: Bruce Sawyer, AA6KX  
Dick Dievendoff, AA6MC  
Bob Wolbert N6IP  
Jim Hollenback, WA6SDM  
JUG Editor, Al Maenchen, AD6E  
3330 Farthing Way, San Jose, CA. 95132

The JUG is the journal of the NCCC, published monthly. Copies are mailed to members whose dues are up-to date. Send material for publication before **1st M onday of the month**

## Next Meeting:

SUMMER PICNIC 95', Saturday, August 19

Our August NCCC meeting will again be the SUMMER PICNIC 95' at the mountain top home of Jack Morgan, W1FEA. This is a fun event for family, friends, and potential new members. Come on out for a leisurely drive to the Sierra foothills for a great afternoon of fun, great pot-luck food, and catching up with our SV and SJV members - this is often the only meeting they make!

Bring your swimsuits! As usual, we forecast sunny and warm conditions, and the swimming pool sure cools you down. Also bring some energy - we've been talking about a volleyball challenge: Phone vs. CW!

This year will be a show-n-tell, so please bring up your latest radio goodies to show off to the rest of the club. WM2C will be bringing a network analyzer so you can check out your bandpass filters, resonant circuits, or tune up some coaxial stubs.

Date: Saturday, August 19, 1995. Time: Noon - 5 p.m.  
Place: QTH of W1FEA, 2040 Pleasant Hill Lane, Auburn  
Talk-in Frequency: 146.550

The NCCC picnic is a Pot-Luck affair. Please bring a meal-time contribution appropriate to the size of the group you are bringing. Below is a suggested list of what to bring:

Calls with the first letter of your suffix of:

A-F: Salad, soup, chips & dips, salsa, paper plates, plastic utensils, napkins, paper cups.

G-O: Appetizers, finger food, hot-dogs, hamburgers, chicken, sandwiches, casseroles.

P-T: Ice tea, lemonade, fruit juice, soft drinks, beer, ice & ice buckets.

U-Z: Fresh fruit, salads, veggies, desserts, ice-cream, cake & cookies.

RSVP: In order to coordinate the right amount and type of food and drink, we need an approximate count on the number of people who will be attending. Please call me, or drop me a note ahead of time, and let me know how many are coming, and what you plan on bringing to the picnic. You can reach me Ken, WM2C via Internet: (ken.silverman@airtouch.com)  
Phone: 510-210-0410 (home). K2MM will relay your reply on packet since I am not up on packet ;-(  
See you all there!!

- Ken, WM2C

de K2MM

# John's Jottings

## FIVE-MEG SCORES

I hope you all enjoyed seeing your 5-Meg scores in last month's JUG. Turns out that stand-in JUG editor Al, AD6E is also the 5-Meg-Award administrator. What a natural source for JUG material!



In addition to the scores, Al also published the 5-Meg rules. I talked with him about the paperwork he needs for 5-Meg credit, and I'll pass along his answer — he needs your summary sheet. If you send me your score via e-mail or packet, include the summary sheet and I'll print it out for him. If you send me just your line score, it will be published in the JUG but won't be credited toward your 5-Meg score!

## WORLD RADIOSPORT TEAM CHAMPIONSHIP

Remember in college how the common pronunciation of ROTC was Rot-See? Well, if you find W-R-T-C too jumbled a mouthfull, just try saying Wurt-See! And be sure to read the article by Bruce/AA6KX on the NCCC's involvement with WRTC-96.

Briefly, at the last meeting, Rusty/W6OAT brought news that the PVRC had abandoned its effort to organize a 1995-96 WRTC competition. This event was last held in 1990 in Seattle. Rusty was the chief judge then, and he was largely responsible for encouraging the PVRC this year to pick up the WRTC baton and run with it. Though Rusty was surely disappointed by the PVRC's withdrawal, his disappointment quickly turned around as it became clear that the NCCC might be able to rescue the foundering WRTC-96.

Much discussion followed — first among the members present, then within an instant ad-hoc WRTC committee, and finally by an informal quorum of the NCCC Board of Directors. A straw poll was taken during the general discussion; it showed broad support by the membership for a WRTC-96 effort. Also, after the ad-hoc group finished, the NCCC Board endorsed the NCCC's WRTC rescue.

However, it was thought that an undertaking this big cannot proceed without formal approval by the membership. As such, a discussion and vote on NCCC's involvement with WRTC will be held at this month's Picnic meeting. Come with your questions, and help us figure out if WRTC-96 is a project for the NCCC!

## JULY SPRINTS

A subscriber to CQ-CONTEST recently complained how tedious the summer doldrums were becoming, and observed what the world really needed was a quick contest! If he had been looking at his contest calendar, he would have noticed two Sprints in July — the Asia-Pacific Sprint and the Internet SPRINT.

Activity in the A-P Sprint was low. Among NCCC'ers, only Steve/N4TQO managed to get out of bed for the 5:30 AM start. Steve made 17 QSOs, and this placed him in the middle of the pack among non-AP entrants. This was the A-P Sprint's first running, and another will be held Sep 30.

In contrast, the eighth running of the Internet SPRINT had great condx and terrific participation. This running saw the return of TV-Bob who made an excellent score and will certainly finish among the top five. Bob usually logs Sprints by hand, but this time he used the copy of TR-Log he won at Dayton. He says he sees now why so many Sprinters use TR-Log, and he won't be logging Sprints on paper anymore!

## TOWER TIP

Several weeks ago I spent four or five hours at Al/AG6D's QTH helping him and his friends put up a 70-foot tower with a KT-34XA on top. I was very pleased to finish the job without getting sunburn or heat exhaustion! Having been not so lucky in the past, I wondered why things went so well this time. My conclusion: respect for the sun! I made sure to liberally apply SPF-30 sunblock (especially on top of my ears), and I dressed in long white pants and a white T-shirt (though they did get very dirty). Stiff shoes, an NCCC cap, and sunglasses completed the outfit. Those UV rays had no choice but to bounce right off!

Respect the sun,  
For She is the Mother  
Of all Propagation!

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## Contests (from page1)

September 13-15  
YLRL Howdy Days  
September 16-17  
NA Sprint, Phone  
10-GHz Cumulative  
Scandinavian Day, CW  
September 23-24  
CQWW RTTY  
Classic Radio Exch.

September 30-31  
Asia-Pacific Sprint  
October 7-8  
Calif. QSO Party  
October 28-29  
CQWW DX, Phone

# THIS MONTH'S SCORES

Not much activity reported this month. Must be vacation time or some such nonsense. Please send your scores for ANY and all contests entered (or even dabbled in) to K2MM at the address below.

ARRL 50-MHz SMIRK	QSOs	Grids	Bands	Total
WA8LLY	22	9	A	128

All-Asian DX	QSOs	Mults	Total
NF6S	281	147	46,599

Asia-Pacific Sprint	QSOs	Mults	Total
N4TQO	17	7	119

Internet SprINT	QSOs	Accuracy
N6TV	165	96.5
K2MM	119	93.7
AE0M	48	87.3
N4TQO	27	87.1

Send scores to: John Zapisek, K2MM  
10559 Sterling Bl. Cupertino, CA 95014  
408-446-9377 or k2mm@maspar.com

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## Reflector Clatter

For sheer abominable confusion and guaranteed catastrophe, this one was actually QRV a couple of years ago:

IS5IHS

Yes, that's right: a stuttering burst of 19—count 'em—dits.  
- Garry, NI6T

---

Trey's callsign is particularly memorable on ssb:  
WAXAHACHIE NICARAGUA FOUR  
KNICKERBOCKER KNICKERBOCKER NICARAGUA

- John, NT5C.

---

No, NO — our Fearless Leader's call really sounds like \*this\* on ssb:

Write Knight Four Knight Knight Night

- Walt, AC10/4

---

DTI inspector -  
"You realise, sir, that UK licence power is 400W?"  
CQ-WW-SSB op -  
"But we only use this 8877 as a shack lighting modulator"  
- Al, GM4BAP

# First Impressions of Terrain Analyzer (TA) by Ken, WM2C

If my boss reads this article I'm cooked. I just got a new toy, Brian Beezley's new Terrain Analyzer (TA). I spent most of today playing with a simulation of our CQ WW CW contest expedition site down south. The location is a W6QHS type location, and I was examining where to place antennas on the hill top.

It was fascinating to see the effects of height, distance, and frequency on the antenna pattern. As Dave can attest, it is definitely possible to place antennas too tall on a hill top. As always, effective antennas for 160m are difficult to erect. I suspected that if I put a low 160m dipole at the edge of a cliff, that the cliff would act like a tower. Well, according to the software, I can't get something for nothing. While much better than a low dipole away from the cliff, it still was not what I was expecting. In this case, I think I'll wait until I get to the site to make some last minute assessments.

I installed TA on the 486 DX-2 66 at work, and calculations were just about instant. On my 386DX25 laptop at home, it takes about 4 seconds per change/calculation. The software is very easy to use, and within a few minutes you can master the basics without the manual. With a mouse you can click on the antenna, and drag it around to change its location, or height, allowing quick and easy changes.

While I find the manual a bit lacking on guidance, it does show you how to find the optimum height of stacked yagis, shows you how to overlay patterns for comparison, how to automatically find the optimum antenna height for single or stacked antennas, and lots of other tips. TA comes with a new file format, and you can easily import antenna patterns done in free space from other programs such as AO, YO, and NEC/Wires.

If you live on a flat plain, TA may not offer you much over AO, but in most other cases this tool will be invaluable for optimizing your antenna installation before it goes in. I highly recommend it for anyone looking to optimize their antenna system. This tool lets you "do the right things right".

---

Dear Youth,

If you are 25 or younger and into contesting, send a message to K3EST@netcom.com to join the youth reflector of the CQ WW.

About 20 fellow contesters are already on it.  
73, Bob, K3EST

## A Call to Action: WRTC-96

Remember the 1990 World Radiosport Team Championship? On July 20, 1990, 22 international teams of the world's best HF contesters gathered in the Seattle area to participate in this historic event. With some generous help from corporate sponsors (Icom America, HRO, U.S. Tower, MFJ, Ameritron, NCDXF), a group of Seattle-area hams managed to host this week-long celebration of international goodwill. All 22 teams were provided housing, a station to operate in the contest, and plenty of entertainment afterwards. All involved agreed the event was a roaring success. For the people in Seattle, it was a week of rubbing elbows with the world's best and enjoying the good cheer. Even those of us who didn't make it to Seattle got a chance to earn that "winner" T-shirt for contacting enough of the /WG teams during the competition.

After the games in 1990, PVRC eventually decided to sponsor the next WRTC. As many of you may be aware, this was planned to be held in July 1995 in conjunction with the IARU contest. However, PVRC realized this past spring that the plans they had made were simply bigger than the time remaining before July. The upshot of that was that they postponed it for a year, to July of 1996. Now, for reasons that are not totally clear to this writer, PVRC has decided they do not want to continue with their sponsorship of WRTC-96. They mentioned this decision to both FRC and NCCC, thereby giving either group a chance to pick the ball up from them. Rusty Epps, W6OAT, who had been the chief of judges at WRTC-90, brought this message to the July NCCC meeting and absolutely electrified the room with the news. Rusty posed the question: "Do we want to do it, and do you think NCCC can pull it off?"

After the formal NCCC meeting concluded, a group of us interested in the WRTC concept hung around to hash it out. That hard-core bunch stayed in the HP cafeteria until nearly midnight considering Rusty's question. Ideas on how we could do this thing just flew around the room. Finally, we all agreed that NCCC was in a better position to pull off WRTC-96 than any other club in the country and that we could do it and do it in 1996. But, and here's the catch, it's a big job...much bigger than the dozen or so of us sitting around the table could handle by ourselves. To make this event the success we want it to be will require a lot of help from a lot of people—not just NCCC, but other clubs in the Bay Area as well.

To give you a flavor of what we're contemplating, here's the broad-brush outline: We will host up to 50 teams of 2 persons each from around the world. In general, the IARU member societies (e.g. ARRL) will be responsible for selecting their quota of teams for the competition. As sponsors of the event, we will provide guest housing and transportation within the Bay Area for the competitors. However, all competitors will

be responsible for paying their travel expenses to get here. We will hold this in conjunction with the IARU contest in 1996 and probably throw in another event or two on our own in order to determine the final placement. During the competition, we will need the use of one complete operating station per team—up to 50 stations. Part and parcel of the festivities will be a chance to show off our beautiful corner of the world to the contestants and to give hams in the area a chance to mingle socially with the world's best. We're talking parties here—maybe a week's worth! But one of the ground rules we established is that this thing can't cost NCCC a cent; the event has to be entirely self-funded.

Since those initial discussions, there has been a flurry of activity. This writer somehow emerged from the initial meeting as co-chairman for the event, though we haven't yet located the other co-chairman. Bob Cox, K3EST, has accepted the position of Technical Director for the competition. With his years of experience as Contest Director for CQWW, Bob is preeminently qualified for this pivotal role. Rusty Epps, W6OAT, has assumed the role of Publicity Chairman; he'll be NCCC's ambassador to the world in promoting the event and getting support from other clubs. Dave Leeson, W6QHS, has agreed to be our Finance Director. That makes him the fellow responsible for obtaining corporate sponsorship for the event and then keeping our plans from exceeding our budget. Numbers of other people have already volunteered their time and their help, so it's clear that we've got a dedicated team willing to pitch in and do the leg-work to make WRTC-96 a success. But we can't do it without broad-based support from the Club. Hence, the purpose of this article.

We need to hear from you. Do you see any reason why we can't do this, and why we shouldn't go forward with this? Those of us who watched the last WRTC recognize this as a golden opportunity for NCCC. We can have a grand time of it hosting these teams in the area, all the while bringing international prominence to NCCC. And who knows, these guys might even have a thing or two they could teach us about contesting. But those are the reasons why we *should* do it; if you see a reason why we *should not* proceed, speak up now. We want to make a formal announcement of NCCC sponsorship of WRTC-96 by mid-August, so if you see reasons why we shouldn't do this, you need to speak up quickly. And on a different note, let us know if you would be willing to pitch in and help. We're going to need host families who can house a visiting contester for up to a week, people who can help drive the visitors around to the various events, people who are willing to lend use of their station for the IARU contest, etc. And then there's that point about parties. We're going to look to the Club for some major support in that area! So to make WRTC-96 a success, we will need a lot of help. Are you willing?

- de Bruce, AA6KX

# Random messages pulled from the Contest Reflector:

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QST de W1AW  
ARRL Bulletin 73 ARLB073  
>From ARRL Headquarters  
Newington CT July 25, 1995  
To all radio amateurs

SB QST ARL ARLB073  
ARRL073 New RFI book from the FCC

The Federal Communications Commission has released a new Interference Handbook for consumers. The 24-page, full color book will be stocked by FCC field offices around the country to provide people experiencing interference to home electronic equipment with information and solutions to interference problems.

The book deals not only with interference to televisions from radio transmitters, but also illustrates and describes interference caused by poor antennas (weak signals, ghosting); electrical interference from home devices such as hair dryers; electrical interference from power lines; and interference from home computers and low power radio devices such as garage door openers.

In addition to interference to televisions, the handbook describes solutions to interference to hi-fi systems, telephones, and video cassette recorders. Techniques for solving problems include the use of ferrite cores, improving receiving antenna systems, checking cabling, and isolating interconnected units to find the one that is at fault.

The book lists addresses and phone num-

bers for sources of high pass filters, common mode filters, band reject filters, ferrites and beads, ac line filters, telephone filters, and interference resistant telephones, as well as an extensive list of manufacturers of home electronic equipment.

Page one of the new FCC Interference Handbook says "Many interference problems are the direct result of poor equipment installation. Cost-cutting manufacturing techniques, such as insufficient shielding or inadequate filtering, may also cause your equipment to react to a nearby radio transmitter. This is not the fault of the transmitter and little can be done to the transmitter to correct the problem. If a correction cannot be made at the transmitter, actions must be taken to stop your equipment from reacting to the transmitter."

ARRL Laboratory Supervisor Ed Hare, KA1CV, says, "This is the statement from the FCC that hams have been waiting for. The book takes a fair and honest approach to explaining responsibilities and cures for interference problems. The FCC team that put this together has done a fine job with a complex technical and emotional subject."  
NNNN

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## CT TRAINER

A very nifty CT-like contest CW trainer for the pc is available at [oak.oakland.edu](http://oak.oakland.edu) in `SimTel\msdos\hamradio` called `PED411i.zip`. The program simulates the CT screen and sends contest exchanges while keeping track of your rate and score like CT. You can send to the program using the keyboard or by attaching a paddle to the parallel port. It also supports SoundBlaster audio for very realistic pileups of up to 18 (!) stations calling at once (without a sound card it uses the internal pc speaker but with only one station calling at a time). The "orderliness" of the pileups can be set from normal to chaotic, which deter-

mines how many calling stations stand by while you make your QSO. The program also has an RIT control to "tune in" the calling stations. A nice package which we have found to be more fun and more realistic than RUFZ.

73, Dave N3AHF

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## QRQ SURVEY

Wow, within a few hours of posting my request, I have received many responses; some long and quite detailed. Thanks to all you QRQ types who have given your thoughts, experiences and stories. Also received requests to post a brief summary of how others have gone on to QRQ status.

### 1. The age factor.

Many pointed out that many QRQ operators became that way while quite young. Ken, WM2C, two years after being licensed at age 13, went to ARRL HQ when 15 and was tested at about 55 wpm! Also many others had had various musical training experiences as kids, then became hams as teenagers, and found CW to be a sort of "natural skill," one or two being comfortable at very high speed (like 70+ wpm!) listening, not typing or writing it down.

### 2. Natural Ability

Some people are just born with "faster wiring". They naturally have lightning quick reflexes. Some become athletes, some fighter pilots, some happened to become CW operators. Rapid reaction response time helps.

### 3. Experience with CW on the air.

Lots of CW QSOing helps a bunch in improving speed.

Lots of trying at CW contesting helps, the SS contest was suggested by several responders as the best one for CW QRQ experience build up and practice.

Join a CW net, try to keep up with what is going on, don't be afraid to join in!

#### 4. QRQ Receiving Practice.

Contest logging programs require that you know how to type rapidly, without looking at the keyboard, and that you know the program commands. Both TR and NA have contest simulator programs built-in for help. The PED411.zip trainer program (available from oak.oakland.edu, in the SimTel\msdos\hamradio file) is a specific CT contest program trainer. The "new" RUFZ program is a great QRQ build-up call-sign-to-keyboard-entry training aid.

Spend time copying to the mill random groups of both charters and numbers. Morse Academy is specifically good for this practice. Also, all the CW test programs of MA can be sent at very high speeds for "reading in the head" practice, and practice at mill copying being. Code Master V allows keyboard or text file input of kilobytes of text for very long, high speed CW listening practice session, up to 30 min or more at even 50 wpm.

On the air QSOs should not be carried on by writing everything down, except what has to go in the log. Just listen, and force oneself to QSO at ever faster speed.

CW training in the military created many QRQ operators. Not sure that is a good enough reason to join-up, but if you are young.....

Spend lots of time, daily if possible, just listening to very high speed stuff. Even faster than you can hear a dit from a dah for awhile. Need to get the brain accustomed to the sound. Then bring the speed down to only 5 or 10 wpm faster than you know you can copy with pencil or mill, and spend 30 minutes twice or so a day just listening. After a couple of weeks, surprisingly, you'll be understanding the text! Then jump the speed another 5 wpm, in surprisingly little time, a few

months, you'll be at 45 or 50 wpm! (Lost name and call sign, but sort of a repeat of an article in the March 95, I think it was, Worldradio mag.) Doug, KR2Q says he went from 18 to 27 wpm in one step using such a method!

Among many, Larry, K7SV; Tony, K1KP, and Ken, AB6FO said to learn to copy on the mill (computer keyboard) dropping as many letters and then words being as you can. After while you will realize you don't have to type it down anymore (unless in a contest using one of the programs) because you already have the info in your head, you have heard and understood the CW already, just like oral English language.

#### 5. QRQ Sending Practice

Don't use a keyboard!

"Real men use paddles. Bigger men use bugs. I'm not a bigger man", Bill, KM9P, 55+wpm.

Adjust the paddle to a very light action. Don't want to slap it all around the table.

Practice lots of sending REAL FAST. This requires that you think in Morse CW, and will do wonders in also improving your QRQ receiving. It is all in your mind, so train your mind in high speed sending as well, and the receiving will also become QRQ. Johnny, KE7V, 55+wpm.

A keyer for QRQ work is better than a bug, since it does a better job training your ear. You have to listen more closely to operate a keyer accurately, so it is a better QRQ trainer of CW as another language for you. K8 Joe "Palooka".

Well, that's the summary of information about 24 hours after my request.

Thanks again to you all, you have given me, and many others much valuable information and food for thought!

73 and Aloha,  
Jim Reid, AH6NB (Happily retired on the Island of Kauai)  
Hawaii, USA Email:  
jreid@aloha.net

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## WHICH ANTENNA?

Hi there Chaps

I'm already the UK agent for Force 12 and KLM antennas and may well be taking a HyGain dealership soon. Needless to say I have to use one of those manufacturers products - but which. Some time ago I had a C-3 and a TH7 up on different towers 150 ft apart and at the same height. The C-3 was always as strong as the TH7 on 20 but did not have a very good front to back (an advantage to pick up mults?). I never was able to do much in the way of comparisons on 15 and 10 because of grot condx. Intuitively all those elements on the TH7 should work better - but how do we explain equality on 20m in tests?

Intuitively (wish I had better to go on) I think the KT34XA I now have up gets out better than the TH7. Not had a chance of a C-3 versus KT34XA test. One just runs out of time.

So - what's it to be (at 110 and 75 ft) C-3's - TH7's or KT34XA's -

What do you do?

73  
Ron Stone, GW3YDX - EMail  
ron@gw3ydx.demon.co.uk

[hot topic? see the replies on page 8 - Ed]

# reply 1

The discussion of stacking tribanders has some interesting aspects. For starters, note that one of the best and most competitive stations in the world, EA8EA (OH2MM, et al) uses stacked TH6/7's, so don't write anything off. However, the problem for a station in an area with (a) lot's of competition and (b) non-rare mult. is that your signal must stand out from the crowd.

My own personal theory, for what it's worth, is that you lose directivity in a loaded antenna because the pattern is broader for a shorter element, even if lossless. It has been pointed out that if traps were really the entire source of lowered gain, they would be hot to the touch.

The ideal would be to illuminate the entire azimuth of an intended target, say all of Europe. This would probably dictate different beamwidths from different distances. Since you can correlate beamwidth with antenna gain, you could decide whether it is worthwhile to have more gain than the simplest log periodic or tribander. For reference, my 12-el Hy-Gain LP seems to have the 7.25 dBi gain they say it has (confirmed also with MN/AO). By comparison, the C3 calculates out to 6.6-6.7 dBi, but has a more convenient size because it is all active.

My experience with the KT-34XA was that it didn't have any staying power. The reliability in my location was so bad that I traded it for some other antennas. I also have a TH7, which has had some trap and joint problems, but has been pretty reliable for a 20+ year old antenna (made from an old TH6).

If you use a 204BA as a standard of comparison (smallish end of the monobander range, but works good), you would be seeing another dB over the LP and maybe 1.5 dB over the C3/TH7 (you can count on 8.25 dBi from the stock 204BA). In everyone's experience, this seems to make a much bigger difference than you would expect, although the reasons aren't at all clear but might be due to ionospheric fading statistics (% of time you stand out of the crowd).

The gain difference in any antenna setup can be washed away in a minute by using

bad coax. If you are serious about antenna gain, you should be using some form of hardline, even if only surplus CATV stuff. The same is true of amps that don't really put out 1500 watts.

So what's the bottom line? For a US station, I believe there's reason to try for as much gain as you can get, since the azimuthal beamwidth is going to be wider than the target area at any DX-type distance. It is questionable whether the KT34 is reliable enough to count on, even though it seems to have a lot of gain. I wouldn't count out the standard of comparison (TH7) or the longer LP's (Hy-Gain 1009). It seems that the ultimate tribander still isn't on the market, as it should be possible to come close to the performance of three monobanders. It is certainly the case that a close stack of monobanders probably gives up so much that a tribander may be a better choice. (BTW, the LP is spectacularly insensitive to adjacent antennas, even showing SWR while only a few feet above the ground).

I'm working slowly on interleaved 40-20's and 15-10's, working for full bandwidth, control over F/B and full gain. I'm probably halfway there. It seems to me that the ideal tribander would be 0.4 wavelength on 20m, and would have full-size elements and full bandwidth, with nothing given away on 15 and 10. I'm also working on putting high-band directors on the lower band antennas in a stack, to undo the pattern distortion you get otherwise. I've got some good designs for 2-band antennas with LP driven cells that make me think that the TH11 might be an interesting choice. It would be interesting to see if things could be improved by eliminating the WARC band pieces. OE6MBG is running stacked TH11's, and getting great result

I guess the main thing is not to believe in magic, but stick with what works. Hope this ramble is helpful. Expect to change whatever you put up as new antennas come on the market, and don't cut corners with coax.

73 de Dave, W6QHS

## Reply 2

I am running a stack of TH7's (102 & 55 ft). I have yet to find a time that the stack isn't better than the lower or the upper. It is

VERY nice during contests to be able to swing the upper to VY/VE8 and have the lower at the east coast. This has paid off in the last 2 SS Contests for me.

The current stack will never change as far as im concerned... Works too well!! Im sure once I play with it, Ill lose it!! ha

See ya! Rich KI3V Reno, NV

## Reply 3

Hi Contesters,

Recent discussion abt stacking tribanders involved lot of references to NEW C3 antenna versus KT34 coil-less and TH7 classic trapped tribanders.

When I visited ARRL HQ in Jan, I was shown freshly installed C3 on the roof.

Lack of traps was emphasized BUT it was immediately obvious to me that C3 is EFFECTIVEIY TWO ELEMENT PER BAND beam! I am absolutely sure it CAN NOT beat my 20+ years old TH6 with all the losses involved as it sports hefty 4 elements on 10m and decent boom with 3 el. on 20&15m however short they are.

Users seem to be under well known effect of new antenna increasing owners activity and bringing nice DX contacts which might have been also made with the old one.

While log periodics are nice broadband load for solid state RF stages, gain per boom length leaves a lot to be desired for discrete HF ham bands!

Considering wide azimuth coverage on the cost of reduced gain, I thoroughly enjoyed operating 40m CW in IARU contest with 1/4 wave ground plane antenna!

No rotor failure and nice mults from unexpected directions...

I am still puzzled about the replacement of my urban TH6/402BA combination with more modern aluminum!? Has anybody modeled good old TH7 from pre-NEC days?

73 de Mario, S56A, N1YU.  
email: Marijan.Miletic@IJS.SI

Continued, Page 9



# Treasurer's Report - 1 August 1995

# Treasury Notes

de AB6YL

Income Category	budget	actual YTD
Membership dues	4500	2340
Advertisements	300	300
General fund contributions	300	251
Vanity callsign contributions	70	31
CQP contributions	0	50
Non-member JUG subscriptions	0	18
<b>Total income</b>	<b>5170</b>	<b>2990</b>

Expense Category		
JUG publishing & special mailings	(3620)	0
NCCC share of CQP expenses	(500)	0
Membership awards	(650)	0
Visalia Hospitality	(100)	0
Vanity callsign for club call	(70)	0
CQWW, WPX etc. awards	(125)	0
Contingency	(105)	0
Self-funding activities (Banquets, badges, etc.)	(0)	(3.49)

**Total expenses** (5170) (3.49)

General Fund Balance	5931.04	Respectfully submitted,
Repeater Fund Balance	1289.65	George Daughters, AB6YL
Checkbook total	7220.69	Secretary - Treasurer

Far more business-like and efficient than the legislative bodies of the state of California, the NCCC membership approved the budget for fiscal year 1995-96.



Approved figures appear in the first column, and the activity to date is in the right-most column. It is important to note that, of 200 members, only 108 members have sent in their dues for this year! PLEASE look at your JUG mailing label... if it says you're paid through June 1995, then MAIL A CHECK TO AB6YL NOW!!

## Reply 4

A properly designed 2 element yagi has about 7 dBi of gain.

By comparison, you probably get about 8dB of gain on 20 meters and 10 dB on 10 meters with monobanders the same length as the TH6.

Incidentally, if you don't mind the narrow bandwidth, it is possible to get \*both\* high gain and relatively good F/B on a 2 element very short boom yagi. The 6M yagi I published in the 19th Eastern VHF/UHF conference proceedings has 6.8 dBi of gain and 17 dB F/B on a 21 inch boom.

—Zack zlau@arrl.org

And so it goes. . . . There were several more replies, but space here is limited. This is typical of the interaction you can get on the Internet Contest Reflector - Ed

\*\*\*\*\*  
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