

dePresident, WM2C

Ken's Pen

HOLIDAY PARTY 17 Dec Pleasanton Hotel.
Make reservations now. Page 8 for Details

Contest Calendar
deK2MM

As I write this, I am on a plane traveling back from Spain, and the CQ WW SSB just finished a few hours ago. While in Spain I had the opportunity to spend some time with the crew of Union de Radioaficionados Espanoles (URE), which is equivalent to the ARRL. Meeting hams from foreign places, especially contesters, is what I really enjoy about my travels. The ops at URE were great hosts.

I was able to operate Saturday afternoon, and ran into W6QHS on 15M. Dave spotted me on the cluster, and I had the chance to work some of the NCCC gang. Actually before Dave, I worked Carlos NP4IW/6. He demonstrated that persistence in contesting pays off. When he first called, all I got was 4I, 4 portable 6, etc. After a number of attempts I couldn't make the call, so I blew him off rather than losing the frequency. A few minutes later, he called again, and I got IW/6, and I pieced the 4IW/6, and then made a leaping assumption that it was NP4IW/6. I guessed correctly, and Carlos was in the log - Little did Carlos know that it was me at the other end! Call recognition is an key talent in making QSOs in marginal conditions.

The above example was one of the others I used while offering contesting advice to the gang at URE. Actually, we had some pretty lengthy talks on all aspects of M/S operation, as that is their favorite class, as well as mine. I'd like to share with you some of the other things we discussed at URE, as these pointers are timeless, yet often are forgotten.

Technical preparation of your station well before the contest will avoid problems during the heat of the battle. Spend time long before the contest to make sure all is working correctly. Avoid doing any last minute changes that go untested. While that hastily installed vertical for multiplier hunting seems like a good idea, make sure it doesn't interact with you other antennas, and degrade your station performance. An all band vertical installed at URE at the last minute caused some serious financial damage to a radio that was not turned on. The coupling between the all band vertical and a dipole a few feet away was inducing nearly 12V of RF across the coax connector in the shack. Smoke radio number 1. Then we fired up the FT1000 and found the RX was dead on the main VFO. We got it working for about an hour. Smoke radio number 2. Amp number 1 is dead and #2 does not load on 10 or 15 meters.

November 11-12

WAE DX Test -- RTTY

OK/OM Dx Test

November 18-19

ARRL SweepStakes -- SSB

November 25-26

CQWW DX Contest--CW

December 1-3

ARRL 160 meter Test CW

ARCI Holiday QRP Sprints

Hombrew Sprint -- CW

TOPS 3.5MHZ Test CW

December 9-10

ARRL 10 Meter Test

December 27

Internet SprINT -- CW

December 30-31

ARRL Straight Key Night

RAC Canada Winter Contest

Ken's Pen Continued

The point is you should check all your equipment long before you plan on using it in a contest. If possible, have spare equipment that you can use in case you run into troubles during the contest.

When I finally sat down at a radio, I just did my thing, found a frequency, and started running the US on 15M with 100W. The last CT 100 meter was in the +170 range for most of the time, and the URE guys were amazed that I was doing that kind of rate, when they couldn't get a run going. When I finally left the operating position, one of the URE guys smiled, and said I just taught them a big lesson. Persistence. He said that they typically call CQ a few times, and if nobody calls, they give up and search and pounce. He saw that I just stayed there, calling CQ after CQ. How many times can you call quick CQ's a minute? Lots. See Page 2

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Ken's Pen Continued fm Page 1

You only need a small percentage answered to have a decent rate.

The URE gang also asked how I found a clear frequency to get such a good run going. Well, the fact is, I didn't have a clear frequency! I was hit with S9 EU splatter most of the time, but I told them that the key was to find a frequency that was clear in the target area, not a clear frequency on our receiving end. Often we are so tempted to snag a quiet frequency on our end, only to have no takers. So we give up, tune the band, and run across a nice pile-up. After one or two calls, the MULT is in the log. Wait just one minute! If you can break a pileup in just a few calls, then you are loud enough to call CQ! The problem is finding that frequency that will produce results. We often forget or ignore the fact that there is a weak station underneath, or off to the side, or our "clear" frequency. Well that station might be weak on the West coast, but he may be +20 in Europe, which is your target audience. No wonder why you couldn't get a run going.

If you ever have the chance to travel, I would strongly urge you to get on the air from the distant QTH. If you can get on during a contest, even better. Gives you eye opening perspectives about the other end. With these new experiences, you can better adapt your winning strategy back home. After a few weeks in Spain, I am "feet dry" in Walnut Creek for just a few days, and I am off again this weekend until the end of the month. CU as 4M5X in the CQWW CW. 73, Ken

CQWWCW DXPEDITION 4M5X will be a M/S operation from Venezuela by WM2C, WS4E, KOPP, KE7X and WX9E. Outside the contest, operators will sign YV5 from November 21-28. QSL route for 4M5X is YV5ARV or WS4E. QSL for the YV5 crew go to respective operators.

The Northern California Contest Club

President: Ken Silverman, WM2C
 86 Grandview Place, Walnut Creek, CA 94595
 510 210 0410(h) 510 279 6411(w)
 Internet: ken.silverman@airtouch.com

VP/Contest Chr: John Zapisek, K2MM
 Sec/Treas: George Daughters, AB6YL
 Directors: Bruce Sawyer, AA6KX
 Dick Dievendorff, AA6MC
 BoB Wolbert, N6IP
 Jim Hollenback, WA6SDM

JUG Editor: Larry Word NF6S
 2184 Bluebell Drive, Livermore, CA 94550
 510 449 9195(h) 408 434 1841 Ext 308(w)

Internet: word@crl.com or cword@isissm.com

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 last Monday of each month.

This Month's Scores

CQP	Cty.	Catg	Mult	Score	QSO's	CW
W6BIP	SF	SO H	52	140,712	902	902
KJ6DL	?	SO H	57	106,818	880	114
WD6EKR	Mtry	SO L	54	39,312	364	0
W6ISO	Lake	MS ?	49	35,623	299	129
WA6SDM	?	SO ?	45	24,390	201	140

ARNARTS RTTY DX

WA6SDM	120 QSO	42Mult	Score	S/O
			340,560	

CQWW RTTY

WA6SDM	QSO's	MULTS	Score	S/O	H/P
	426	232	139,432		

CQWWPH

	QSO's	Mults	Total
W6XR/2 SO H/P	1591	471	2,060,154
WA6TKV MSH/P	712	278	540,710
+KD6KKP			
AA6MC SOA H/P	525	292	408,216
AE0M MS ??	488	204	262,752
AB6YL SO H/P	384	183	178,791
KJ6DL SOA H/P	95	69	16,077
N2ALE SO L/P	42	37	3,626

NCCC TREASURER'S REPORT through 31 October 95.

Income Category	Budget	Actual
Membership Dues	4500	3974
Advertisements	300	300
General Fund Contributions	300	251
Vanity Callsign Contributions	70	51
CAP Contributions	0	50
Non-Member	0	18

Total Income 5,170 4644

Expense Category

JUG Publishing & Special Mailings	(3620)	(1061)
NCCC Share of CQP	(500)	(0)
Membership Awards	(650)	(0)
Visalia Hospitality	(100)	(0)
Vanity Callsign for Club Call	(70)	(0)
Contingency	(105)	(0)
Self-Funding Activities (Banquets, Badges, etc)	(0)	(0)

Total Expenses (5170) (1103)

Balance at start of Fiscal Year 95-96 5931
 Present General Fund Total 6508

Respectfully Submitted,
 George Daughters, AB6YL
 1 November 1995

deK2MM

John's Jottings

SS MID-TERM

I'm writing this a few days before Sweepstakes. By the time you read it SS/CW will have come and gone, and SS/Phone will be right around the corner.

SS/PHONE: 18 Nov SAT 1:00PM-NOV 19 SUN 7:00PM PST (2100Z-0300Z)

The club showed great enthusiasm at the SS-kickoff meeting a few weeks ago. Several members volunteered to help fill holes in the S Calling Tree. (Thanks!) And just about everybody made aggressive score commitments:

Call	Goal(CW/PH)	Call	Goal(CW/PH)
N6TV	300K	W6ISQ	400/400Q's
AA6MC	2000Q's	W6BIP+N1EE	100K/100Q's
N16T	100K/100K	N6IP	100K/100Q's
AB6EQ	150K	KV6S	300Q's
AB6YL	150K	N2ALE	300Q's
AEOM		N6OM	250Q's
+NOBBS	150K		
AE6Y	150K	KG6I	100/100Q's
AC6NS	1000Q's	W0YK	100/100Q's
K2MM	1000Q's	KN6QT	100Q's

SS PRIZE -- NCCC PEN-KNIFE

This year's NCCC prize for SS participation is a Swiss Army knife with NCCC engraved. Hope you remembered to make at least one QSO on CW, because you have to submit logs on both modes to qualify -- Just like last year. This year, however, you do not need to make your 100K on a single mode. Just rack up 100K points total and you're in!

SS REMIDERS

Try your best to work as many other NCCC'ers as you can. WE'll be gathering at 11pm PST Saturday night (0700Z) on 3885. Also, remember that Bruce/AA6KX will be operating from VY1JA on phone. (I'm not sure if he'll be signing Jay's call or his own.) That should help many of us bag that Clean Sweep on phone this time.

The ARRL deadlines for log submissions are Dec 5 (CW) and Dec 19 (SSB). You can submit your logs via E-mail to contest@arrl.org. To get entry forms and/or rules, send a request to info@arrl.org, or download them via FTP from oak.oakland.edu--look in/pub/hamradio/arrl/Inforserver/contests for files novss frm and novss.ris. Also please send me a copy of your summary sheet by Dec 15. This is needed for our club submission to the ARRL! Remember to mark your summary sheet:

Club Participation? YES

ARRL Affiliated Club: Northern California Contest Club

Our very own California QSO Party was a big hit again this year. So far Ken/K6PU has received over 200 logs via postal mail and almost 60 logs via e-mail. Ken reports that he's on a record pace for tabulating the results this year. Way to go, Ken, and thanks from the whole club for all your hard work!

Rusty/W6OATs Multi-Single Champagne Challenge appears to have been won by W6EEN who nosed out WB6IRC by only a few percent. The presentation will be made at Visalia next April. Congratulations, Don!

If you haven't sent in your log yet, you still have until Nov 15. Send it via postal mail Ken Anderson, K6PU, PO Box 653, Pine Grove, Ca. 95665 or via e-mail to cqp-1995@kb.org

SEND ME YOUR SCORES

Send your CQP and SS line scores to me via telephone, packet-mail, e-mail, or even snail-mail. John Zapisek, K2MM, 10559 Sterling Bl, Cupertino, Ca 95014, 408-446-9377, k2mm@maspar.com de K2MM

CLUB DUES

There are about 20 unpaid dues. NCCC would be delighted if you would help the club sec/trea. get his books in balance. Send dues to George Daughters, AB6YL

FOR SALE:

105Foot crank-up tower Triex THD6105 Painted Green with slight Damage. \$400
N6KT Rich Smith (209) 227-0106. Tower is located in San Jose, Ca.

NEW ARRL SECTION

From the Internet Contest Reflector. According to W1WEF, NNY (Northern New York) will be a New ARRL Section multiplier starting in June 1996. Rcvd fm Jim AD1C reisert@eng.pko.dec.com

Azimuthal Charts (Internet Tidbit)

Hi Contesters. My thanks to OH1JJS, TF3KX, NT5C, KJ4VH, PA3ERC and W3GOI.

At FTP://oak.oakland.edu:/SimTel/msdos/graphics/gcp915.zip. This file is a small one 113,502 bytes. After unzipping I could only make the program run if I deleted the file gcplocs.dat. I believe this is where you put your own lat and long reference. Without this file everytime you execute the file you have to change the parameters to the wanted location.

This program is a small and extra ordinary one. It even draws a long path chart. It does so with the inclusion of an outer ring along the azimuthal chart, if you wish to do so. VK5BUB should be acclaimed. Peter ON6TT and Ralph KOIR have saw what it looks like from Heard Island. I do not think you guys will have problems downloading this file but if you do let me know. Jose Carlos Cardoso Nunes ct1boh@telepac.pt

More Azimuthal Charts: f m :

junger@mtn.er.usgs.gov. There is a unix-based program called gmt(generic mapping tools) that is freeware. The mail addresses for getting the source code is:

kiawe.soest.hawaii.edu

ibis.grdl.noaa.gov

ftp.geologi.uio.no

GMT has a very large (and very useful) collection of mapping tools; if you need just one azimuthal map made, let me know. gmt's output is a postscript file. 73 John W3GOI

Broadcast Filter: fm: "H. Ward Silver"

hwardsil@seattle.edu at atlas. Ive discussed my overlad problems on 160M (and with any serious antenna on 80 Or 40) from the numerous local BC'sters. I just got a BC reject filter from Kiwa Electronics (kiaw@wolfenet.com) and let me tell you it does the job. My overload level is 50db over S9 and even some attenuation and series traps can't get rid of it completely, without getting rid of the signals in-band also. I popped this little box in the RX ANT loop on the FT-990 and was thrilled to find the overload spanked down to the expected s3-5 local noise level. It also cleaned up a multi-station spur at 3550 and eliminates BC coming down the line from the 40-2CD from upsetting the SWR shutdown circuitry in the amplifier output. It slices, it dices...

The filter is in a die-cast aluminum box about 2X2X1.5 with PL-259s. A short 2XP:-259 is provided (Nicely soldered too). The filter will not handle the TX output; it's strictly receive only. Kiwa sells primarily to SWL/BC DXer, thus the no-TX consideration. Attenuation of 1.8-2.0MHZ signals is <3.0db. BC signals below 1.6MHZ are attenuated >60db. Total cost is \$60+\$4 shipping.

Not a bad deal. 73 and CQ-160 Ward NOAX

NEAT KEYBOARD SOFTWARE

I recently came across a great little program which allows you to do some keyboard enhancements to any DOS-based program.

I have used it on my RTTY contesting program (RTTY by W1FB) and will be using it on my other contest programs soon.

Basically, it is a TSR (Terminal - and - State Resident program which allows you to change the keys on your keyboard to send something other than their normal letter or character. In fact, it can easily be set to send a test message as well, or any combination of keys such as ALT-K. All you do is run the program immediately before starting your other program and the operation is completed automatic. When you're done with the other program, you just issue a simple command and your keyboard is back to normal. ebooting also returns your keyboard to normal.

The program is called KEYSWAP and is available by ftp from oak.oakland.edu in the SimTel/msdos/keyboard/ directory. The filename is keyswap12.zip, and best of all....it's free! Not even shareware, completely free.

I used it to replace several two-handed keystrokes such as ALT-K or ALT-E with a single key. Of course, you need to choose your keys carefully--you want ones you normally don't use during a contest, such as] or \. You can also use two handed ones if you want. For instance, I used several of the SHIFT-F keys for text messages such as "Your not in my Log--When did we work?" Handy when you get those dupe messages that shouldn't be, and so on. Use your imagination!! You can even embed the transmit command in the text so you don't even have to do that. Works like a charm.

A word of caution, though: The documentation that comes in the zip file is very good, but a certain amount of basic DOS knowledge is required. It isn't plug n play, but if you can handle the Internet, you can handle this. 73, Bill W7LZP wrt@eskimo.com.

PED and VPED fm: Larry Word

word@crl.com. Need some practice for an upcoming contest? If you don't have PED or VPED, it is worth obtaining the programs, for they are some of the best contest simulators around. The programs are freeware, and were written around the CT software format. To get PED and VPED running, you will need a sound card for your computer. PED and VPED were written with the Creative Sound Labs Soundblaster PRO Card in mind, and there is no guarantee that the programs will work on other Soundblaster compatable cards. The Soundblaster PRO is an 8 bit sound card. Some people have used 16 bit Soundblaster cards, but there have been some quirks reported, but there seems to be work arounds. Central Computer in Santa Clara still has Soundblaster Pro Cards for #35.00. 73, GL Larry NF6S (Nine Five Six Seven)

BEVERAGE PREAMPS Internet Tidbit

Fm: Dave N0DH. Thanks to all who responded to my query about preamps for Beverages, here is that summary.

There was not any clear majority except in one area out of a total of 17 responses. 10 people responded with "save your money, you won't really need a preamp with a full size beverage"....Small loops and EWE's need preamps, Beverages probably not. I got one vote each for the following.

Ameco, MFJ, ICE, Advanced Research, ZJ, Palomar and Homebrew. One of the above offered to sell me an intermittent preamp for \$10 with complete documentation. I sent him the \$10.00 dollars as I plan on putting up some small phased loops later this winter for comparison to beverages these loops per a couple of QST articles a few years back.

When I get to the comparison phase I will let you all know how it turns out. The arguments for no preamp were;

- 1) Most modern receivers were sensitive enough to provide readable signals given a fighting chance against the noise.
- 2) Preamps require additional care and feeding to be sure that transmitted RF doesn't "Blow em away", including switching, grounding and diode protection. Some respondents suggest that some preamps must actually have all power removed from them during transmit to keep from blowing the FETs.
- 3) Many preamps are subject to intermod and overload when presented with really loud signals such as in contest and DX pileups.
- 4) After a week with the beverage I find that I can hear stuff that is "Not There" when compared to the two phased inverted L's, and because I occasionally like to contest the KISS philosophy seems to pay off given a choice more times than not.

At any rate Guess I'll see you guys in the pile ups!
Thanks Again. Dave N0DH

PARTIAL CORRECTED CALLS Fm: Dick

AA6MC. On 9 October I posed this query:
How much do you send when correcting an incomplete or busted call?

On CW, my relatively recent practice has been:

Me: CQ Test AA6MC Him: K1ABC
Me: K2ABC 5NN3 Him: K1ABC K1ABC 5NN5
Me: K1 TU AA6MC

or on SSB

Him: (Garble) ABC Me: ending ABC, 59 3
Him: K1ABC 59 5 Me: K1, Tks, QRZ

But one contester I greatly respect abbreviates this still further, as:

Him: (garble) ABC Me ABC, 59 3
Him: K1ABC 59 5 Me: AA6MC

What's your practice? Do you send the entire corrected call, the part you missed, or just invite the next QSO?

I received 37 responses:

First, what is the minimum exchange permitted by the regulatory authority and by contest rules?

The FCC wants your call, not the call of the station you're working, so there's no requirement from the FCC perspective to utter the other station's call all in one transmission. (I verified this with the ARRL Regulatory Branch). Of course if I operate outside the US, I must comply with the local regulations. FCC regulations mean little outside the United States. Argument on this point to me directly please.

The contest rules may not require the sending of the other station's call. CQP, for example, says that the exchange is a serial number and country or state, then sending of the other station's call isn't a required part of the exchange. Other contests differ. Few contest rules say that the callsign must be sent all at once.

About half of the respondents agreed with my new practice, responding with the part of the call that was omitted or busted suffices, and is the quicker.

Another half felt it important to respond with a full call, many for pragmatic reasons. It doesn't speed things up much if you have to go back again to someone who isn't sure you have his call correct because you came back with a partial correction.

A smaller group indicated that "It depends" on rate, perceived skill level at the other end, and/or signal strengths. If you're sure that the op at the other end will understand what's happening, you can make it very brief.

NU6S, K1ZX, VE2ZP/VE9CB, AA5BT, K1DG, G4PIQ, N6ZZ, WA2SRQ, AB6WN, N1PBT, W3GOI, N6TR, and KA9FOX agreed with my new practice; send what I've missed or blown.

KK5EQ/4, K7FR, KB5YVT, N3RS, KM0L, K1IU, N2IC/0, N6IP, WA7EGA, N5RZ, N4TQQ and NI6T think that sending the entire call is more appropriate or is required.

CT's CORRECT feature will send the entire call. TRLOG can send either the entire call or the corrected portion, based on your preference.

WN4KKN, WX9E, KI5EZ, K7GM, K1VR, K5ZD, and VK5GN gave more involved "It depends" responses. On CW, send the entire call. Maybe "Roger, K1" is enough on SSB. But unless the rate is high, it doesn't matter much, so you might as well send the entire call.

W2UP used to not send any corrections, (My third example), but isn't entirely sure he wants to continue that because others bust his call.

No One thought it a good idea to skip acknowledging the correction, as in my third example. One admitted to using this technique with testers that they're confident will understand, but not as a general case.

The net is, the station at the other end must be confident enough that his call is in my log that he won't call again to hear his entire call.

Once again, thanks to those that participate in my survey. I now know better how read the rules, and I may change my practice, probably to the "it depends" category, depending on the contest rules and rate. If I can remember in the heat of the battle! Best regards to all. Dick Dievendorff, AA6MC.

Editor: Send replies to Dick via internet address:
dieven@almaden.ibm.com or by mail.

"Some Antenna Thoughts"

by Tom Schiller, N6BT, FORCE 12

The following several pages are excerpts from various writings and presentations. They are shared with the intent to further our collective knowledge about antennas. There are always things to learn and there are things still remaining to invent. Sometimes, it depends on how we look at the subject. As Thomas Edison once said, "I have just discovered something that doesn't work."

If you have had an HF station for a while and have upgraded your antennas, think back to the time when you first got on the air and also when you moved from a wire antenna to a trapped tribander. For me, it was in 1959. The rig was homemade, using a crystal controlled 6AG7 oscillator driving an 807 amplifier to about 25 watts output. The antenna was a 130' long windom up about 30'. When I worked a KN9 back in Wisconsin from our home in California, I was thrilled. Although I could hear Japan on the windom on 40 mtrs, I was unable to make a QSO, so my Dad and I put up a wire vertical, supported by a 2x4 wooden frame. That made a substantial improvement and my first contact was JA2CMD. My enthusiasm for being able to make contacts in other countries soon begged the question for a more effective antenna on 20 meters, where the windom simply was not very effective. A new antenna was installed at about 30', which was a trapped 2 element tribander. As before, this was another giant step upward in performance. I enjoyed 10 and 15 mtrs a lot, but almost dreaded going to 20, which was commonly referred to as "kilowatt alley." The comparative performance on 20 was way down, so, the next improvement was to a monoband 20 mtr beam. I was then "in the hunt" on 20 - finally. This upgrading of antennas is a very common situation and it is interesting to work at comprehending why the changes in antennas made such dramatic improvements in overall station performance. This difference has even been acknowledged in radio clubs who developed internal DX and contest competitions: categories were made for the smaller station, specifically "a tribander and wires." This category was made in the spirit of enhancing competition and was not based on what is called "anecdotal information." It was concluded from long term observations by skilled people that trapped tribanders are not competitive with monobanders (non-trapped). Actually, most everyone who has been operating for sometime knows this, too.

One of the enjoyable things I have been priveleged to do is speak at conventions and clubs. At those meetings, the above paragraph has been portrayed in similar fashion dozens of times, along with asking about the performance difference. In trying to answer the question, the most confusing item was the gain associated with the trapped tribander. Restricting this discussion to 20 mtrs, the usual published gain numbers for trapped tribanders in the 14-18' boom length ranges from 7-8.9dBd. Expanding the trapped tribander boom length to the 24-36' range results in published gain numbers from 8.4-9.5dBd. With that much improvement over a full-size dipole, no wonder the trapped tribander is so much better than the wire antenna! If it really is true, how can we then relate the more impressive performance improvement of the monobander to the trapped tribander when the gain numbers are no where this different?

The answer is, of course, that we cannot relate to the published gain numbers for trapped tribanders. Often, too, the gain numbers for monoband beams is also inaccurate. How do we know this?

The advent of computer modeling has provided a useful tool to help us determine the actual improvements we have (all) observed. The key item to look at is the noted substantial improvement between the trapped antenna vs. the monobander. Given the published gain numbers for the trapped antenna, the true gain figures for the monobander(s) would necessarily be much higher. Are they? No, they are not. They are actually lower. The gain figure for a practical 4 element 20 mtr monobander on a 24' boom is about 5.7dBd and for a 5 element on a 36' boom, about 6.5dBd. Since the published gain figures for the trapped tribanders are greater than those for monobanders, it becomes obvious that the trapped numbers are in error. Let us use the monobander gain figure as the upper limit of our antenna increments. If we now model the initial low dipole or inverted V antenna, we

will be able to bracket the lower limit of the range. While there are many variations to this initial antenna, a general range will be from -4 to -6dBd. This is compared to a full size dipole at the same height as the apex of the inverted V dipole. The full range then becomes -6 to +6dBd for the antenna improvements of an inverted V dipole to the monobander, with the trapped tribander residing somewhere in the middle. This means that the trapped tribander is essentially a directional dipole on 20 mtrs. This can be verified by modeling a 20 meter monobander using loading coils (like in a trapped tribander) of appropriate Q. What it underscores is that a horizontal, rotatable dipole is a great antenna! The directionality of the trapped tribander is a real improvement, as it's pattern gives an improved signal-to-noise on receive. The trapped tribander also offers some lobe compression, which will lower the nose of the lobe(s). These items, coupled with the equivalent dipole in overall performance provides the noted improvement over the wire antenna. It is, however, still down several dB from a non-trapped yagi with gain over a dipole.

To enable comparisons, several models are provided on the following pages for baseline numbers to make comparisons between stated (claimed) gain numbers and the monoband models. Another model has been included to provide some insight into a trapped 20 mtr antenna. There are some key items to remember when trying to model a trapped antenna. The first was noted by Brian Beezley several years ago when he said that he realized there was a good clue to the lack of performance from a trapped antenna. This is that all three bands had to have a 50 ohm feedpoint. This is extremely difficult since the element positions are fixed for all three bands and since most shorter boom designs are substantially less than 50 ohms, the difference has to come from somewhere. The place to look is at loss in the traps. Loss is a very convenient method to increase the feedpoint and also broaden out the VSWR bandwidth. Having substantial loss in the antenna can be unintentional, as well as by design. Some military antennas, for example, include resistors. The loaded model is a 3 element 20 mtr yagi on an 18' boom. It is modeled with the elements in typical location and the loading coils are placed at the same location on the elements as the traps; however, only one coil is used instead of the two as found in most trapped designs. The basic design tracks with the practical one listed for an 18' boom, 3 element 20 mtr yagi. As noted in the data, the feedpoint of the practical one is 27 ohms, which leaves us 23 ohms short of 50 ohms at the feedpoint. We can compromise a bit and look for a target feedpoint of around 43-45 ohms, which will be a good match at the equipment after running through a typical length of coax. The coax will add a very small amount of loss; besides, the 44 ohm average number is already only a 1.13:1 VSWR (assuming no reactance). So, the task is to work at increasing the feedpoint to 50 ohms from the 27 we start with. Some detuning was done, as can be seen by the decreased F/B ratio. The Q of the coils was then reduced until the feedpoint rose into the 40+ ohm range. The results are shown. A driver element is also shown by itself as a loaded dipole. The final Q selected for the coils (e.g. traps) was 20 & 30 and both are shown. Some measurements of coil Q has been done and the selected Q's appear reasonable. Measurement of a coil encased in an aluminum tube (as in the trap) has not been performed. Bill Orr offered the opinion that the Q goes way down when the tube is surrounding the coil. The actual Q could be lower than 20 or 30 if the antenna were not initially detuned. One will always hear a comment such as, "If there were that much loss, my traps would melt." Some do. Others might well be capable of dissipating substantial amounts of heat. As a thought, we might recall that aluminum is a great dissipator of heat and is in very close proximity to the coil. Radiation (heat) from the coil might well transfer very well into the aluminum, which has air circulating around it, especially in a breeze.

Another item to notice when modeling loaded antennas is the current profile. The current will have its traditional arc out to the coil (trap). Then, it takes a straight line down to the tip. This might be the actual case, or it might be that the software is simply intergating a straight line, when the actual is something different. The actual might be that after the coil, the current is substantially reduced. If so, maybe the aperature of the element is negatively affected. This, along with the loss might account for the lack of "performance" between a trapped antenna and a non-trapped one.

NOTICE

NEXT NCCC MEETING

The next meeting is Friday 17 Nov 1995 at the HP Santa Clara. Pizza from W6OAT's Give PIZZA a Chance will be served. The Address is 5301 Stevens Creek Blvd, Building 50. On entering the grounds you will go past guard, straight ahead, crossing the moat.

From North on 280, exit at Stevens Creek Blvd turning left onto Stevens Creek, and left at first stop light.

From South on 280, exit Lawrence Expressway take middle lane and make left turn onto Stevens Creek Blvd., and right turn into HP.

Our Evening Speaker is Carlos NP4IW/6. Topic will be the Easter Island, XR0Y, and Salas Y Gomez, XR0Z Xpeditions.

NCCC Holiday Banquet

The annual NCCC Holiday Banquet is just around the corner! The NCCC holiday party is always stylish, always loads of fun, and definitely the place to be! Join us for the fun, festivities and jolly good times on Sunday 17 December 1995, at the Pleasanton Hotel, Main Street, Pleasanton. Bar opens at 6PM, Dinner at 7PM. Spirits served at the cash bar.

MAKE YOUR RESERVATIONS NOW. Payment must be made in advance, and no reservations will be made without an accompanying check! Please mail your check by 3 December 195 to George Daughters, AB6YL, 1560 Klamath Drive, Sunnyvale, Ca 94087

MENU

__ Charbroiled Breast of Chicken, W/Mushroom marsala sauce, served w/seasonal vegie and rice pilaf.

__ Herb and Peper roast prime rib of beef aujus, w/ roasted red potatoes and fresh vegetable.

\$32.00 per person includes your choice of entree above, a salad of mixed california greens w/balsamic vinaigrette, rools, coffee or tea. This is a feast not to be missed!

Contact George, AB6YL at 408 732-2676(H) for more information.

NCCC Team Leader for the WRTC

The NCCC has been invited by the WRTC to submit one club member as a team leader for the upcoming WRTC. The team leader can then choose a person of their choice to be their teammate, but this person cannot be from the NCCC.

The NCCC BOD is looking for recommendations on who the NCCC representative should be. If you are interested in being chosen for this event, or have suggestions on who would be a good candidate, please write me a letter saying so. Include a brief statement as to why you (or your recommendation) should be chosen for this position; accomplishments in contesting, and any other material you feel pertinent. You must respond in writing, postmarked no later than December 4, 1995. The team representative must be submitted to the WRTC no later than 15 Dec 1995. Please send your nominations to:

Ken Silverman, WM2C, 86 Grandview Place, Walnut Creek, Ca 94595

INTERNET TIDBIT Fm: David Robbins

The first CW contest has been run using the TS870. Results seem more favorable on CW. Specific comments follow.

1. Getting use to the filtering took a bit of practice, the skirts are so sharp tht signals disappear or appear very quickly while dialing across them. Going down to 50HZ bandwidth is amazing when you want to seperate close signals, but I wouldn't recommend it for running. It might be nice to have a smaller step in bandwidth settings. It seemed sometimes that 400hz was too narrow, and 600hz was a bit wide, I don't think we ever went to 800hz or 1 khz exdcept when scanning to see if the band was open late at night.

2. The first time we really got on the band with lots of loud signals I thought something was wrong...there was chopped up CW and odd stuff all over the place, turn out it was massive mixing products. Turning on the AIP made it all go away, of course this also reduces sensitivity to weak signals. But when even the left coast QRP guys are loud it doesn't matter too much. The pronounced appearance of the mixing products was very confusing at first. I played with AIP settings a bit, turning on the AIP GAIN function in the menu seems to restore some of the sensitivity without bringing back the mixing products. The manual talks about the AIPGAIN function restoring S-Meter readings to normal, but it also seems to boost the RX gain. I will have to play with that some more to see what the real effect is.

3. The TX is very clean. I was able to copy moderately strong signals within about 5kc of the 870 TX freq on a TS-930 with a tribander about 300' from the 20M tower. With the same radio I couldn't copy anything on 15M where the TX is a TS-940 and the tower is about 200' from the tribander. robbins@berkshire.net

ONE DIT DIFFERENCE: Fm: Larry NF6S. During CWSS I keep getting QSO B4, QRZ SS DE Finally I hear NF6H working a contact. Ah Soooooo. word@crl.com

FT-1000MP: Honoring Yaesu's Founder

In 1956, Yaesu was founded by an entrepreneurial young engineer in Tokyo, Sako Hasegawa. Mr. Hasegawa, intrigued by the published work of Art Collins, set about to design and manufacture an SSB Transmitter using the "Filter Method" of single sideband generation.

Word of Mr Hasegawa's design work spread quickly throughout Japan and soon radio amateurs from all over the country were requesting transmitters just like his earliest prototypes. SSB receivers, then transceivers, followed and the parallel work of Messrs. Collins and Hasegawa revolutionized the HF Communications industry.

The FT-1000MP is a tribute to the pioneering spirit of Mr. S. Hasegawa, JA1MP, who became a Silent Key in 1993. A unique blend of analog and digital technology, the FT-1000MP represents the long-standing tradition of Yaesu designs: Performance without Compromise, and maximum cost - benefit to the Customer. The Enhanced Digital Signal Processing (EDSP) technology introduced in the FT-1000MP is coupled with an unequalled RF and IF receiver design, yielding a competition grade package without peer among elite-class transceivers.

Yet the Collins Mechanical Filters incorporated into this revolutionary design serve as a reminder that basic, fundamentally rigorous IF design techniques cannot be forsaken in the interest of cost savings.

Sharing both the long-term heritage of Yaesu quality and the more recent heritage of Yaesu domination of the high-end HF market, the FT-1000MP stands to take its rightful position atop the competition in this redefining segment of the HF market.

Editor: Pleased on Interest--Thought it interesting. Larry

MORSE REQUIREMENTS STAYS Fm: Jim Reed K1TN. On October 23, the 1995 World Radiocommunication Conference, WRC-95 opened in Geneva. As described in November 1995 QST, Page 106, one of the matters expected to be raised at the conference was a New Zealand proposal to delete from the radio regulations of the International Telecommunication Union the requirement that amateurs demonstrate Morse code ability in order to be licensed to operate below 30MHz.

On Tuesday morning, Oct 31, New Zealand offered its proposal in Working Party 4C. While some other administrations expressed support, most who asked for the floor either opposed the change or said the time was not right and the issue needed further study within the amateur community.

Summarizing the discussion, the chairman of the Working Party said that most comments opposed the proposal and that he would send the matter to the working group of the Plenary, which is responsible for agendas of future conferences, to consider adding it to the future agenda in 1997, 1999 or later. This was acceptable to New Zealand.

WRC-95 is scheduled to complete its work on November 17. No conference decision is final until it has been approved in final form by the Plenary, usually late in the conference.

Amateur Radio is represented at the ITU by the International Amateur Radio Union. Present at WRC-95 are IARU president Richard Baldwin, W1RU, Secretary Larry Price, W4RA, and Region 1 vice chairman Wojciech Nietyksza, SP5FM. ARRL technical relations manager Paul Rinaldo, W4RI, is a member of the United States delegation, and other national delegations who also have Amateur Radio representatives. jcain@arrl.org

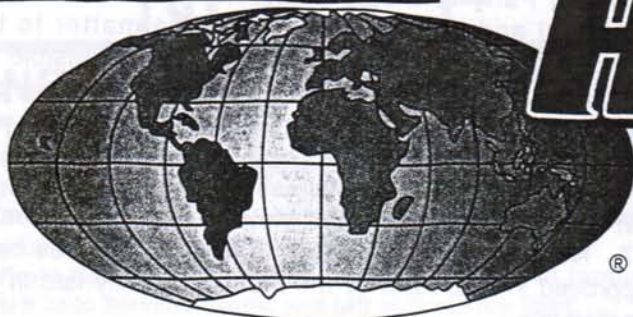
THE LAST WORD

Hi Everyone, I hope this first attempt at putting the JUG together turns out successful. The heart of this publication must rest with the NCCC membership. I need your help with articles, Internet Tidbits, Equipment Reviews, and I have a idea of putting two station pictures (Tower's and Station) each month. Who will volunteer first? Did you buy something New? Give the club your review. The JUG picture will be scanned in for the next edition. I just can't draw. Hi Hi.

Many thanks in advance everyone, but don't forget I need your help, support and inputs. Ed. Larry Word NF6S word@crf.com

> 12 STORE BUYING POWER! <

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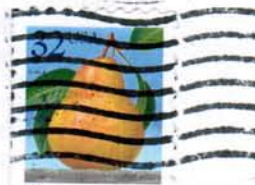
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