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Guests are always welcome at the NCCC! Please join us.

Annual NCCC Awards Meeting

Come To Claim Your Own Award(s) and/or Enjoy Seeing Others Receive Their Awards.

Date:

Monday 12th March

Time:

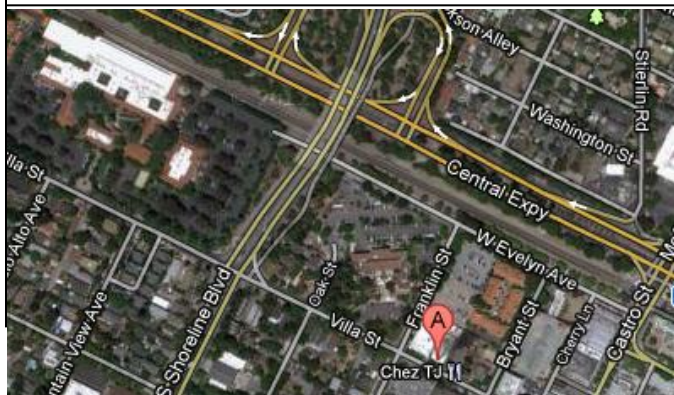
6:00pm schmooze, 6:30pm dinner, 7:45pm program

Tied House; Mountain View, CA

Please RSVP to nccc.n3zttreasurer@gmail.com with your dinner choice :-

Dinner selections for this month's meeting are:

1. Half Pound Burger \$20
2. Traditional Fish & Chips \$20
3. Pasta Primavera \$20
4. Beer Mustard Chicken \$24
5. Baby Back Ribs \$26



From the President...

Greetings KB'ers

On the sunset of my presidency, and very few more opportunities to reach you via this article, I wanted to take a moment to once again let you know the importance of giving a bit back to this great club.

There are all kinds of low impact opportunities available to help the NCCC. One easy one is to take on the spearhead role of NCJ contests, much like W6RGG does for the NA Sprint CW, or K6DGW who has selflessly done this for more of these than I can remember.

If you enjoy operating these domestic contests, but wondered how the teams are formed, why not take a crack at putting them together? If you really like the contest, maybe take a recurring roll at spearheading that contest. Its fun, educational, may enlighten you as to the capabilities of various NCCC stations and more. I can tell you from experience I learned a lot about various stations myself during this process.

I can also share what a great honor it is to be of service to such a great club. I have formed relationships, it has bonded me and given me an intimate look into my favorite aspect of the Amateur Radio hobby... weak signal moon bounce..(Hi! just kidding contesting of course!) but more importantly I have been humbled by the skill, dedication and greatness of the NCCC membership.

Continued on Page 3



Northern California Contest Club

Excellence In Amateur Radio Contesting

Officers:

President	Chris Tate	N6WM	ctate@ewnetinc.com
Vice President	Stu Phillips	K6TU	stu@ridgelif.com
Secretary/Treasurer	Tom Hutton	N3ZZ	nccc.n3zztreasurer@gmail.com
Past President	Jack Brindle	W6FB	jackbrindle@earthlink.net
Director	Kevin Rowett	K6TD	kevin@rowett.org
Director	John Miller	K6MM	k6mm@arrl.net
Director	Bob Vallio	W6RGG	rbvallio@gmail.com

Volunteers:

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Charter Member	Rusty Epps	W6OAT	w6oat@sbcglobal.net
Awards Chairs	Joanna Dilley	K6YL	joanna.k6yl@gmail.com
	Rebar Rebarchik	N6DB	rebar@hamilton.com
CQP Chair	Rick Eversole	N6RNO	rick@eversoles.com
CQP Certificates	Andy Faber	AE6Y	ae6y@arrl.net
K6ZM QSL Manager	George Daughters	K6GT	k6gt@arrl.net
K6CQP,N6CQP,W6CQP QSL Mgr	Ed Muns	W0YK	w0yk@msn.com
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Webmaster Chair	Dean Wood	N6DE	cqden6de@gmail.com
Webmaster	John Miller	K6MM	k6mm@arrl.net
JUG Editors	Ian Parker	W6TCP	w6tcpian@gmail.com
	Stu Phillips	K6TU	stu@ridgelif.com

Thursday Night Contesting:

NCCC—Sprint	Ken Keeler	N6RO	kenkeeler@jazznut.com
NS Ladder	Bill Haddon	N6ZFO	haddon.bill@gmail.com
Slow NS (SNS)	Chris Tate	N6WM	ctate@ewnetinc.com

NCCC Net

Thursday 8 PM

NCCC

Monthly meetings take place on the second Monday of each month !

Details [here](#)

NCCC Membership Information

If you wish to join NCCC, you must fill out an [application for membership](#), which will be read and voted upon at the next monthly meeting. ([PDF application form](#))

To join, you must reside within [club territory](#) which is defined as the maximum of:

- Northern California, anything north of the Tehachapi's up to the Oregon border, and
- A part of north-western Nevada (anything within our ARRL 175-mile radius circle centered at 10 miles North of Auburn on Highway 49).

We have these opportunities available to use multiple times a year, in the 3 major modes of contesting. Maybe more if some took on some of the other contests happening outside the regular season, such as the All Asia or JIDX.

So if you have some time, and would like to share in some of the satisfaction that I have enjoyed, give it a shot. Talk to the VP/CC, let him know you are interested, and I guarantee the fun will begin.

The NCCC is a great organization. It is great because of you, and made strong by the generosity of the NCCC membership and it's willing to give back to the team.

73 es KB

Chris N6WM President

VP/CC Corner

Has someone altered the Second so that it's shorter? Seems like only yesterday we were heading to the California QSO Party and kicking off the contest year... now we are approaching the finish line. That said, there are still a couple of large contest yet to go in the contest year.

This month brings the SSB portion of the CQ WW WPX contests on the weekend of March 24-25th. It would be great to see a repeat of the big gun shoot out between some of our Multi-Multi stations as well as an opportunity for NCCC members to improve their own scores. The WPX series of contests give us a good opportunity to demonstrate our capabilities – especially with the low bands bringing double points to inter-continental QSOs.

WPX with its many multipliers can wrack up score with gratifying speed and heft – it can be a lot of fun either as a well-equipped station or a little pistol. If Phone isn't for you, the WPX CW event comes in May. For something new, there is also the WPX Triathlon which sees its first running this year and is open to any Single Op (all categories) who completes at least 500 Q's in each of the RTTY, SSB and CW events.

Now that the log deadline for the ARRL RTTY RU is past history, the question isn't whether NCCC broke its 2009 Unlimited category club record but only by how much! We sent in more than 3.8M points – results won't be out until June but we clearly beat our own record hands down. Thanks to everyone who participated and help set the new record!

It will be a lot of fun to see the new RU awards (individual and category winners) at this month's upcoming Awards presentation.

NCCC – you KICKED BUTT!!!

73 & KB!

Stu K6TU VP/CC



**Publication of the
Northern California
Contest Club**



From your Editors

This month's JUG is one of the thinnest we've had for sometime. Please take a moment to think about contribution you could send us... contest write-ups, pictures, technical articles... heck, even ideas for content you would like to see in the JUG.

GIVE US YOUR FEEDBACK! Please? Pretty Please????

We know from the high level website stats (courtesy of K6MM) that about 100 folks within NCCC read the JUG on a typical month. That's about a sixth of the members on the roster.

If you have some time, send us some contributions...

If you only have a couple of minutes, send us some feedback on the JUG – what you like, what you don't like and what you would like to see.

73 & TNX!

Ian W6TCP

Stu K6TU

Propagation Predictions – another frontier

Stu Phillips, K6TU

By now you've probably figured out that Propagation is more than an intellectual curio for me! Dean N6BV and his work inspired me to ask different questions and fuel one of my dream's from teenage years... when I first went off to University after High School, I wanted to be a Propagation Physicist. The reality of about 6 paying (poorly paying...) jobs a year quickly brought out the pragmatist in me and I became an Engineer instead.

But that as they say is history...

By now, I know that a number of NCCC members have used the new propagation predictions that we've added to the NCCC web site for a couple of contests. Inspired by N6BV, I wanted to be able to produce propagation maps that showed predicted signal strength in an automated manner. The set I generated for ARRL RTTY RU were a labor of love... taking about 6 hours of mostly manual computer fiddling to produce the graphical output.

This re-ignited my desire to automate the process – something I've been working on for the last 3 years. As you can see from the subsequent predictions, I turned the 6-hour process of human/computer interaction into about 12 minutes of computer time.

Having the tools to automate the process, I started to ask more questions...

How do my contest results (and those of others) compare against the predictions?

How can I further tailor these predictions for specific station configurations

Here's some thoughts on the progress I've made over the last few weeks.

Log Analysis & Propagation Predictions

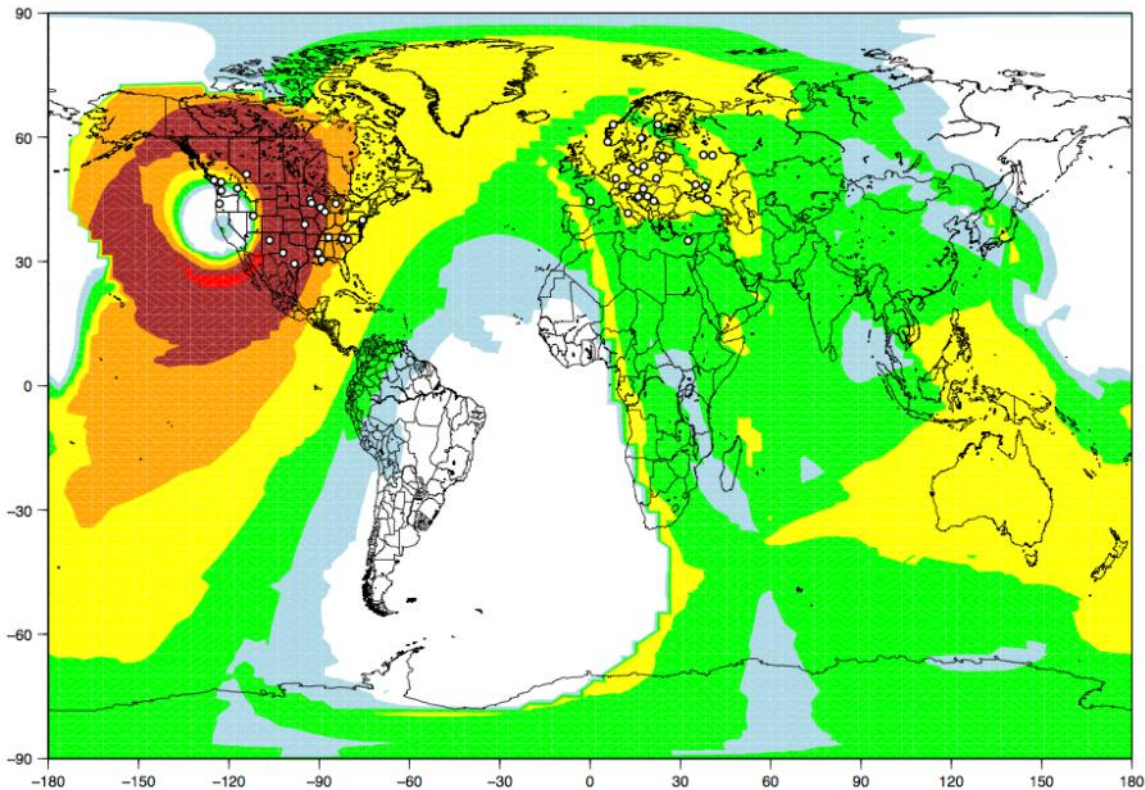
Producing automated prediction maps was a process of figuring out how the prediction engine (VOACAP) generated its area data and how to automate the production of different maps – different geographical areas, different map projections. Once that problem was behind me, I wanted to see how my contest QSO's compared with the predictions I'd generated.

What was one more piece of software to write? J I even got an excuse to write code again!

I leveraged some of the software we use for CQP Cabrillo analysis to be able parse a log file and then use the XML query interface (a programmatic interface over the Internet) to QRZ.COM to look up the Longitude and Latitude of each station in my log. I generated the output in a form that lent itself to being plotted by the

same tools I use for the propagation maps as an overlay.

Here's an example from the ARRL RTTY RU log of K6TU...



This is snapshot of my log for my operation on 20m at 0800 PST on the Sunday morning – if you need to zoom in on the PDF copy of the JUG, press CTRL and + on your keyboard (Ctrl and – will zoom back out). You can see that the stations I worked corresponded pretty well with the predictions. As a reminder, YELLOW is a predicted receive signal of S7, ORANGE S9, BROWN S9+10 and RED S9+20.

It takes about 5 minutes to analyze the log (extracting the location information) AND plot the files for each BAND hour found in the log. For contests like WPX over 48 hours, I aggregate the same hour contacts from each day on the same plot.

I've found this analysis very helpful in comparing my strategy with the predictions. Better still, I can do the same thing for different stations and myself as a way of refining my own strategy planning. This has been enlightening when looking at the decisions I made regarding which band and when – especially when comparing other station logs.

But wait... there's more...

I wasn't content with the default antennas models I used in the VOACAP predictions. The antennas I chose for the NCCC predictions are appropriate to many mid-sized stations – a 2 element Yagi for 40m, and a 3 element for the higher bands.

I knew from planning my own tower installation that HFTA (HF Terrain Analysis – another invention of N6BV) showed significantly higher gain in different directions than the stock antennas I used in the modeling.

How to combine both?

HFTA and custom antenna generation

You are likely already familiar with N6BV's HFTA, a software program included on the CDROM that comes with most recent editions of the ARRL Antenna Handbook. HFTA works with a topographic data file to show the gain of an antenna over specific terrain – taking into account reflections and diffraction effects in the area around the antenna.

I ran HFTA when I was considering a tower installation – my QTH in Woodside is in a small valley with rising terrain in all the interesting directions! Despite appearances to the contrary, HFTA showed I would get significant gain boost at low elevation angles because of the terrain.

An additional software program (MAKEVOA) that is included with HFTA will generate an antenna model that works with the VOACAP prediction engine – but with a gain pattern valid only in one specific direction. After thinking about the different automation projects I'd completed to generate the prediction maps and the log analysis, I saw a way to run HFTA under a script that emulates mouse clicks on HFTA controls. With this script, I could automate large numbers of runs of HFTA and not have to laboriously click away and manually update parameter fields.

Here's an example of why this is helpful. The antenna model generated by HFTA/MAKEVOA takes a single direction and assumes that the elevation pattern and gain are constant through all other directions. The field from the model looks like figure 1 below which shows the vertical and azimuth patterns of the HFTA analysis at a bearing of 30 degrees for my SteppIR DB-18.

This particular model type (type 11) has a single entry for the elevation pattern that is then assumed for all directions (azimuth). HFTA stops calculating the gain at elevation angles above 34 degrees and this leads to the constant gain figure shown for angles > 34.

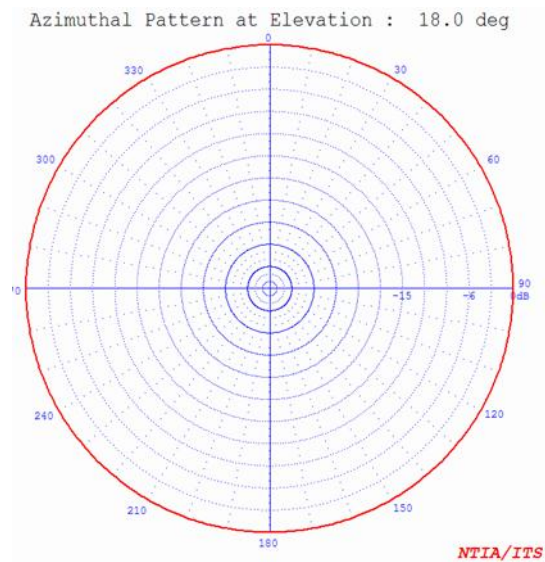
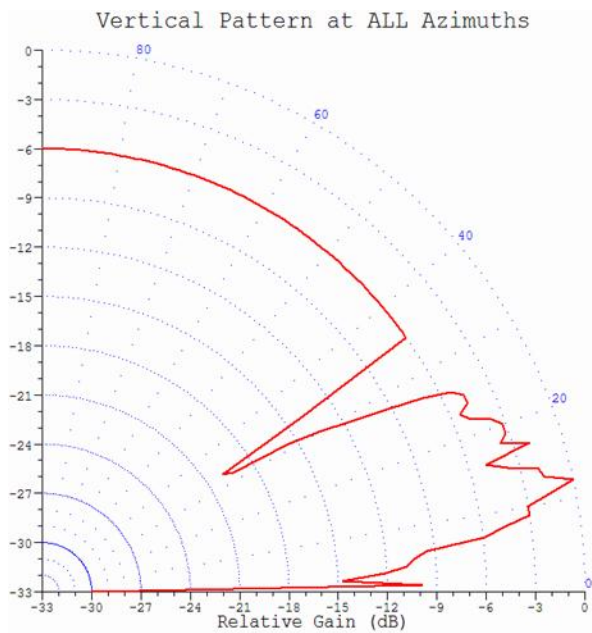


Figure 1: Elevation & Azimuth patterns generated from MAKEVOA

Here's what the picture looks like when HFTA is used to generate a full 360 degree antenna model in single degree increments.

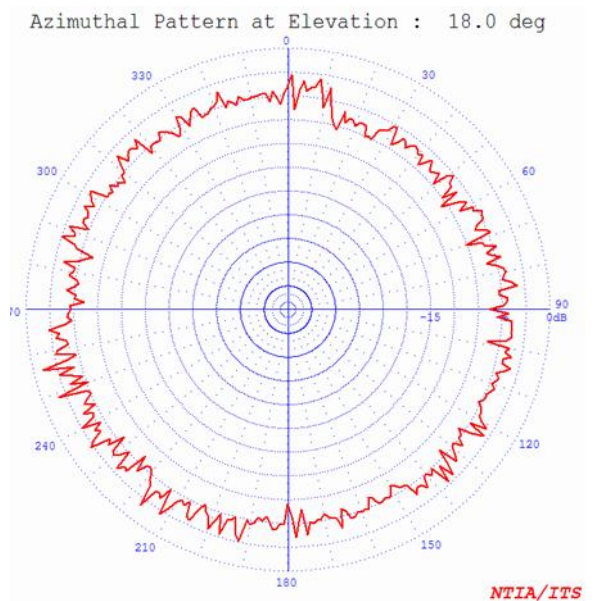
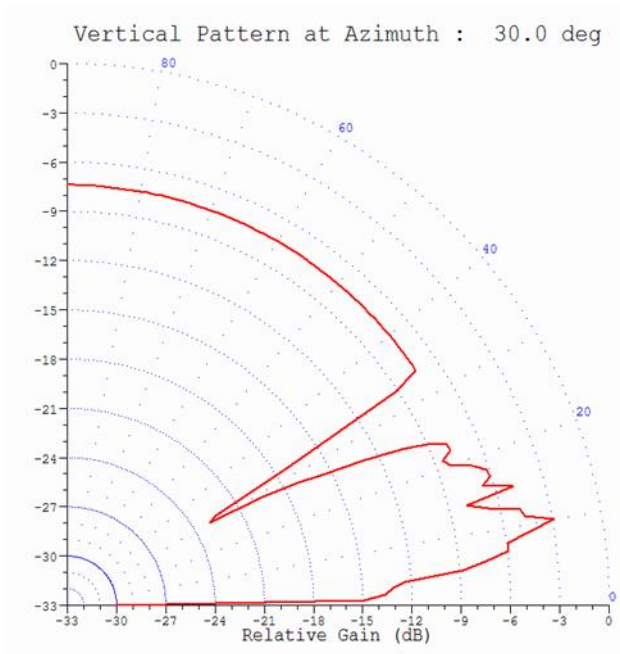
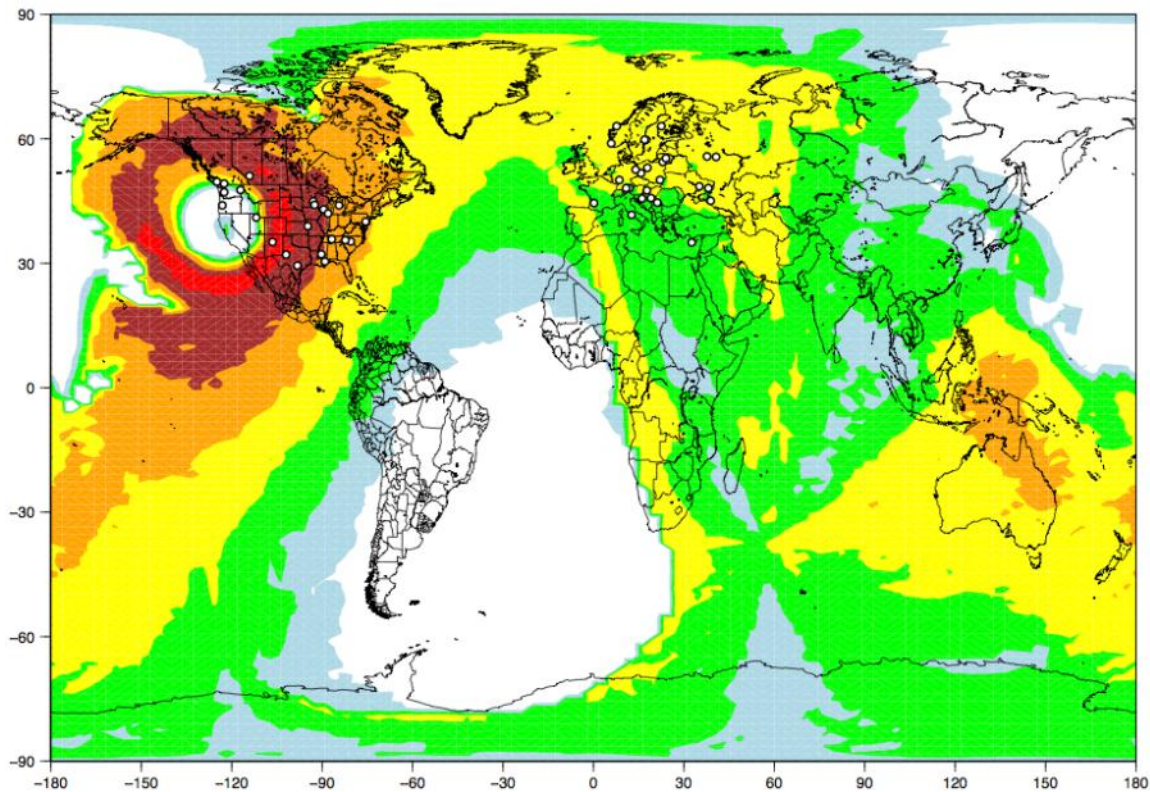


Figure 2: Elevation & Azimuth patterns generated from a 360-degree sweep of HFTA

The effects of terrain on antenna pattern are now more obvious. I used the same elevation angle (18 degrees) in past examples – the effect of terrain in different directions is more pronounced at some of the lower elevation angles. Ideally I'd like to plot the combined elevation/azimuth angles in 3D to but I haven't mastered the 3D plotting tools yet.

Here's the same log analysis (20m, 08 PST, RTTY RU) using the custom antennas I generated using the HFTA automation script.



You can see some subtle differences between the two – stronger signals projected in Indonesia, a broader S7 swath into Africa and a wider S9 area covering the Eastern US. The effects are more pronounced in some of the other prediction runs I have done comparing the stock models with my custom models.

The next step is to “modulate” the custom antenna model with the Yagi’s radiation pattern and so be able get an antenna that can be beamed in one direction.

If anyone is interested in generating their own custom antenna models, I can package up the automation process for HFTA and provide directions.

The combination of the modeled antennas and propagation prediction offers a useful tool for contest planning, post contest analysis and station-to-station comparisons.

New Contest Announcement

The CQMM DX Contest is a World Wide Contest that is a continuation of the popular Manchester Mineira All America CW Contest, organized and handled by the CWJF Group, since 1997.



Date : April, 21 / 22
www.cwjf.com.br

Our colleagues at CWJF in Brazil asked us to mention their upcoming CW contest the weekend of April 21-22nd. You can find a full set of rules in English on their web site shown above. Sounds like another fun event!!!



Contest Calendar—March page 1

QRP Fox Hunt	0200Z-0330Z, Mar 2
NCCC Sprint	0230Z-0300Z, Mar 2
ARRL Inter. DX Contest, SSB	0000Z, Mar 3 to 2400Z, Mar 4
Wake-Up!QRP Sprint	0600Z-0629Z, Mar 3 and 0630Z-0659Z, Mar 3 and 0700Z-0729Z, Mar 3 and 0730Z-0800Z, Mar 3
Open Ukraine RTTY Championship	2000Z-2159Z, Mar 3 (Low Band) 2200Z-2359Z, Mar 3 (Low Band) 0800Z-1159Z, Mar 4 (High Band)
DARC 10-Meter Digital Contest	1100Z-1700Z, Mar 4
SARL Hamnet 40m Simulated Emerg Contest	1200Z-1400Z, Mar 4
RSGB 80m Club Championship, Data	2000Z-2130Z, Mar 5
ARS Spartan Sprint	0200Z-0400Z, Mar 6
AGCW YL-CW Party	1900Z-2100Z, Mar 6
QRP Fox Hunt	0200Z-0330Z, Mar 7
AWA John Rollins Memorial DX Contest	2300Z, Mar 7 to 2300Z, Mar 8 and 2300Z, Mar 10 to 2300Z, Mar 11
QRP Fox Hunt	0200Z-0330Z, Mar 9
NCCC Sprint	0230Z-0300Z, Mar 9
RSGB Commonwealth Contest	1000Z, Mar 10 to 1000Z, Mar 11
AGCW QRP Contest	1400Z-2000Z, Mar 10
QRP ARCI HF Grid Square Sprint	1500Z-1800Z, Mar 10
EA PSK63 Contest	1600Z, Mar 10 to 1600Z, Mar 11



Contest Calendar—March page 2

Idaho QSO Party	1900Z, Mar 10 to 1900Z, Mar 11
North American Sprint, RTTY	0000Z-0400Z, Mar 11
SKCC Weekend Sprintathon	0000Z-2400Z, Mar 11
UBA Spring Contest, CW	0700Z-1100Z, Mar 11
NSARA Contest, SSB	1100Z-1500Z, Mar 11 and 1700Z-2100Z, Mar 11
Wisconsin QSO Party	1800Z, Mar 11 to 0100Z, Mar 12
NAQCC-EU Monthly Sprint	1800Z-2000Z, Mar 12
QRP Fox Hunt	0100Z-0230Z, Mar 14
CWops Mini-CWT Test	1300Z-1400Z, Mar 14 and 1900Z-2000Z, Mar 14 and 0300Z-0400Z, Mar 15
RSGB 80m Club Championship, CW	2000Z-2130Z, Mar 14
QRP Fox Hunt	0100Z-0230Z, Mar 16
10-10 Int. Mobile Contest	0001Z-2359Z, Mar 17
BARTG HF RTTY Contest	0200Z, Mar 17 to 0200Z, Mar 19
SARL VHF/UHF Analogue/Digital Contest	1000Z, Mar 17 to 1000Z, Mar 18
CQIR - Ireland Calling	1200Z, Mar 17 to 1159Z, Mar 18
Russian DX Contest	1200Z, Mar 17 to 1200Z, Mar 18
Oklahoma QSO Party	1300Z, Mar 17 to 0100Z, Mar 18 and 1300Z-1900Z, Mar 18
Virginia QSO Party	1400Z, Mar 17 to 0200Z, Mar 18 and 1200Z-2400Z, Mar 18
AGCW VHF/UHF Contest	1400Z-1659Z, Mar 17 (144) and 1700Z-1759Z, Mar 17 (432)
Feld Hell Sprint	1600-1800 local, Mar 17



Contest Calendar—March page 3

North Dakota QSO Party	1800Z, Mar 17 to 1800Z, Mar 18
UBA Spring Contest, 6m	0700Z-1100Z, Mar 18
Run for the Bacon QRP Contest	0100Z-0300Z, Mar 19
Bucharest Contest	1800Z-2059Z, Mar 19
CLARA HF Contest	1700Z, Mar 20 to 1700Z, Mar 21 and 1700Z, Mar 24 to 1700Z, Mar 25
QRP Fox Hunt	0100Z-0230Z, Mar 21
NAQCC Straight Key/Bug Sprint	0030Z-0230Z, Mar 22
RSGB 80m Club Championship, SSB	2000Z-2130Z, Mar 22
QRP Fox Hunt	0100Z-0230Z, Mar 23
CQ WW WPX Contest, SSB	0000Z, Mar 24 to 2359Z, Mar 25
UBA Spring Contest, 2m	0600Z-1000Z, Mar 25
NSARA Contest, CW	1100Z-1500Z, Mar 25 and 1700Z-2100Z, Mar 25
QRP Homebrewer Sprint	0000Z-0400Z, Mar 26
SKCC Sprint	0000Z-0200Z, Mar 28
CWops Mini-CWT Test	1300Z-1400Z, Mar 28 and 1900Z-2000Z, Mar 28 and 0300Z-0400Z, Mar 29
QRP Fox Hunt	0100Z-0230Z, Mar 30
Missouri QSO Party	1800Z, Mar 31 to 0500Z, Apr 1 and 1800Z-2359Z, Apr 1

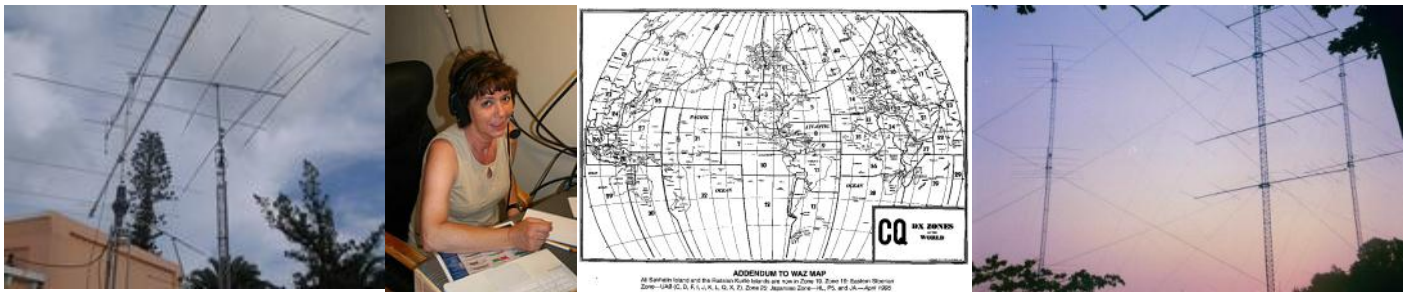


Please consider writing an article for JUG !

April 2012 Newsletter Deadline—March 28th

This is your newsletter so lets make it something we are proud of. I hope you will consider writing an article for the JUG! Whether its about your station, recent contest experience or a technical article we would appreciate hearing from you.

Send your articles to Ian W6TCP w6tcp@comcast.net and Stu K6TU stu@ridgelift.com



12 STORE BUYING POWER



- IC-7000** All Mode Transceiver
- 160-10M/6M/2M/70CM
 - 2x DSP
 - Digital IF filters
 - Digital voice recorder
 - 2.5" color TFT display
 - 503 memory channels
 - Remote control mic



- IC-7700** Transceiver. The Contester's Rig
- HF + 6m operation
 - +40dBm ultra high intercept point
 - IF DSP, user defined filters
 - 200W output power full duty cycle
 - Digital voice recorder



- IC-7600** All Mode Transceiver
- 100W HF/6m Transceiver, gen cov. receiver
 - Dual DSP 32 bit
 - Three roofing filters- 3, 6, 15kHz
 - 5.8 in WVGA TFT display
 - Hi-res real time spectrum scope



- IC-7800** All Mode Transceiver
- 160-6M @ 20W
 - Four 32 bit IF-DSPs
 - + 24 bit AD/DA converters
 - Two completely identical, independent receivers
 - +40dBm 3rd order intercept point
 - And much more!

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