



Publication of the
Northern California
Contest Club



Issue 537

February 2017



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NCCC Annual Awards

March 18th

Tied House, Mountain View



See you there !

President's Report

Hello KB'ers,

“Contest” is in our name, and contesting is our game! We’ve been doing quite a bit of that as of late.

It’s looking very good for us in the Medium Club category for the 2017 ARRL RTTY Roundup. That could mean yet another gavel for the Nor Cal club. Cross your fingers. There was tough competition out there, including our friends from the Society of Midwest Contesters.

Speaking of SMC, they had an incredible turnout for the NAQP RTTY contest. Many of those posting scores were participation points, but they are valuable mults in the 3-club challenge. As I write this, I count 55 logs for SMC and 45 logs for NCCC. Individual scores aren’t that different between the two clubs, but those 10 extra mults (as I write this just a day after the contest) can make the difference. Nevertheless, NCCC is up by 14 logs from February of last year and up by 10 logs from Summer of last year. In this month’s NAQP RTTY, we had fairly bad conditions, yet we still had some great scores in the club. Chris, N6WM, operating from N6RO’s superstation, led the North American pack in the Single Op, Low Power category, with an astounding 129,525 claimed points, considering the bad conditions on the higher bands. Not far behind Chris, and #6 in claimed scores for the contest, was Ken, K6MR, with 108,264 points.

Continued on page 3



Officers:

President	Bob Hess	W1RH	w1rh@yahoo.com
Vice President /Contest Chair	Steve Dyer	W1SRD	w1srd@arrl.net
Treasurer	Dick Wilson	K6LRN	treasurer.nccc@gmail.com
Secretary	Ian Parker	W6TCP	secretary.nccc@gmail.com
Past President	Rick Karlquist	N6RK	richard@karlquist.com
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Director:	Rich Cutler	WC6H	wc6h@yahoo.com
Director:	Ron Castro	N6IE	ronc@sonic.net

Volunteers:

New Member Mentor	Al Rendon	WT6K	wt6k@arrl.net
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K6CQP,N6CQP,W6CQP QSL Mgr	Ed Muns	W0YK	w0yk@arrl.net
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JUG Editor	Ian Parker	W6TCP	w6tcpian@gmail.com



NCCC Net

Thursday 8 PM
 Freq: 3.610 +/-

NCCC

Visit the meetings page of the NCCC website [here](#) for details of the next meeting

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.

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).

Last year, we won first place, US, for CQ WPX RTTY. This year, our turnout was about the same as last year, but it's looking like PVRC may have the edge. It's still too early to tell, however. We had 35 logs (posted to 3830), including 5 multi-op logs. PVRC had several more logs than NCCC, including 5 multi-op logs. PVRC was also way up in their log count from last year, and I'm not surprised. We stole this one from them last year. PVRC had won the 2012, 2013, 2014, and 2015 contests. NCCC's last win, prior to 2016, was in 2011. It's pretty clear that PVRC was out for revenge! Congratulations go to PVRC, assuming they win it in 2017 and, if so, watch out for NCCC in 2018!

I want to note that prior to the WPX RTTY contest, the NCCC Board voted to change the center of our CQ circle to include some of our members who have been sitting outside of the CQ circle. CQ's club circle is a 400 km radius (250 miles). We were able to move the CQ circle to include Dave, KA6BIM, who now resides just inside the relocated circle. The placemark on the Google Earth map is Dave's QTH. Our CQ circle includes all of our members who reside in the existing 175 mile ARRL circle. All of the gain is to the north. As a result of the change, we got 1.6M points for the club from KA6BIM. Other big scores included:

14,864,338 - P49X (W0YK)

2,973,718 – WQ6K (N6IE)

2,264,860 - NO6F (K6TU)

2,244,000 – KU6W (K9YC)

1,594,335 – KA6BIM

1,389,039 – AG1RL (W1SRD)

1,069,225 – AG6AU (W1RH, K6RLR)

I want to thank all of our members who have contributed to the scores in our Focus Contests, including RTTY Roundup, WPX RTTY, and NAQP SSB/CW/RTTY. That's a lot of contesting in the past couple of months. Our next Focus Contest will be the CQ WPX SSB contest, on March 25/26. Although not a Focus Contest, it's always nice to see the tremendous efforts of some of our members in the ARRL DX Contest. This included:

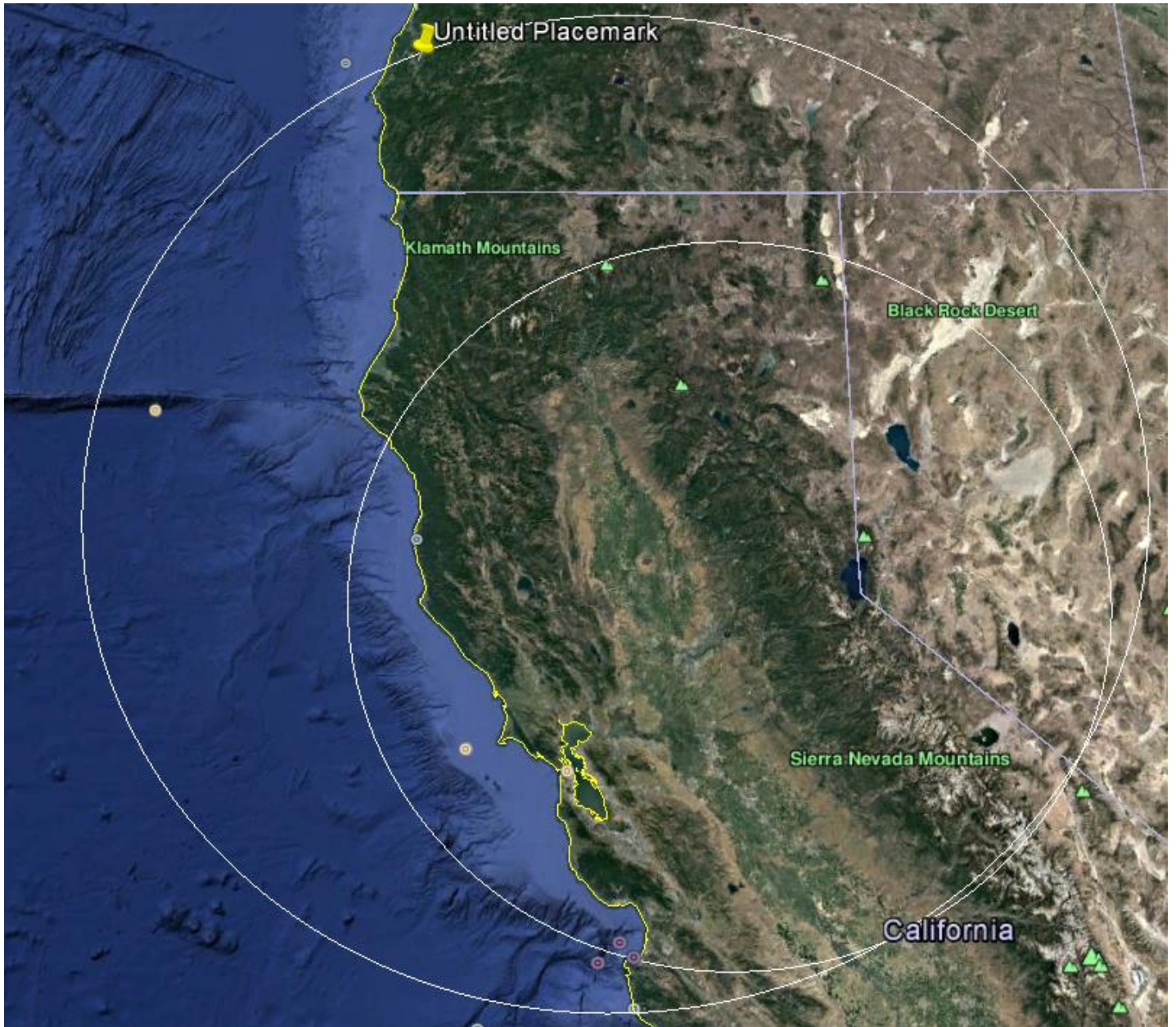
5,608,050 – P40L (W0YK, W6LD, and HA1AG)

6,926,952 – 8P5A (W2SC)

2,184,480 – K6XX

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Proposed 250 Mile Circle



In other news, we're making progress in our effort to attain 501C3 non-profit status for NCCC. Our application has been submitted and accepted by the Secretary of State's office. More to come on this subject, but thanks go out to the Board for supporting this and especially to Ian, W6TCP and Dick, K6LRN, for the work they have done. Special thanks to non-member, Norm, WB6RVR, for coordinating the entire 501C3 project for us.

The Board and some of our members have been busy at work, preparing for the annual NCCC Awards Banquet. Gary, NA6O, our Awards Manager, has been a busy guy as of late. Our plaques will have a new look, and we can thank Gary for that. John, K6MM, has been working on the CQP awards and plaques along with the NCCC annual awards that the membership votes on. Ron, N6IE, will be back, by popular demand, as the presenter of the RTTY awards. Ian, W6TCP, has made all of the arrangements at the Tide House and Dick, K6LRN, has been paying the bills. It just doesn't get much better than that! The Awards Banquet will be held on Saturday, March 18th, at the Tide House, in Mountain View, beginning at 11:30 AM.

The Board is out there right now, recruiting candidates for our election of officers and board members in April. Our existing officers, President (yours truly), and Vice President, Steve, W1SRD, will have served two terms and will not be eligible to run for re-election. We're hoping that Dick, K6LRN, and Ian, W6TCP, will make themselves available to be elected for second terms. If you're interested in a Board position, please contact John, K6MM.

Lastly, I'd like to say that our new meeting format of alternating weeknight dinner meetings and weekend lunch meetings every other month seems to be working out well. Attendance has been about the same for each meeting, but many names of those in attendance have been different. Clearly, the East Bay weekend lunch meetings have been popular with those members who reside in the valley and the foothills. Likewise, the core membership in the South Bay can continue to enjoy dinner meetings. I hope we can continue to do this, with most of our weekend meetings in the East Bay and most weeknight meetings in the South Bay.

Bob , W1RH

W1ARR SK

It is with a very heavy heart that I report that my good friend "BH", W1ARR, former NCCC *Jug* editor c. 1975, became a silent key just a little while ago. The news came from W1FV and K1DG. Apparently he succumbed to pneumonia after his massive stroke just a few weeks ago.

From W1FV: "Bob's final wishes were for there to be no funeral ceremony or service of any kind, but Bob's brother, Greg, will organize some a gathering of Bob's friends at a future date."

Bob, N6TV

To the NCCC Membership

The Comstock Memorial Station, W7RN, has now been in operation for ten years. We have proven that new records can be set from Nevada and that we can win National contests.

The charter for our not-for-profit organization is to advance the art of radiosport. We do this by:

- Providing the equipment and antennas for competitive operators to excel
- Providing a venue for KBers to operate who do not have their own competitive stations
- Providing a training ground for new hams and new contesters
- Optimizing antenna design and performance
- Hosting a remote station that has access to all of the antennas and rotators
- Encouraging the fellowship of multi-operations such as we did for W1AW/7

At the end of 2016, we declared the station completed for its initial design and basic antenna systems. It is now in operational mode. Grady, W5FU, has shouldered the enormous costs of building and maintaining the station and for funding the five-year lawsuit that resulted in us gaining our Special Use Permit. The three iterations of building and keeping a 3 element 80M yagi in the air and operational, alone, cost more than \$75K (Yes, it is up and working well and it weathered the storms with no issues).

Grady's financial involvement is now concluded. We must turn to the operators of the station and of the remote system to fund maintenance and upkeep. Operators who desire future enhancements will have to provide the resources for new equipment.

Unfortunately, at the end of January, we have already identified about \$20K of repairs that will be needed in the spring. This incredible winter of snow and ice has taken its toll on some of the older antennas. That notwithstanding, there is normal wear and tear that will always need a maintenance budget.

This is a challenge to the NCCC to let us know if the Sierra Chapter is a valued resource to the Club. We are looking for ideas for how to create a sustaining membership fund and how to maximize the contributions for the remote. K6DGW is heading up a feasibility study for us.

We are also seeking more KBers to operate the station, either in person or remotely. We are considering creating another remote host for SO2R. We are also soliciting members to become part of multiops using the remote.

In the past, the most formidable challenge for KBers has been the trip from the Bay Area, especially during contest season (winter). I am aware of the issue because I have driven to Oakland most every month for more than three years. It takes me 3.5 hours, door to door.

WX5S drives his 20 year old Honda for SS Phone. N6TV avails himself of advance purchase air travel. WK6I has, for the first time, not been able to get here for the RTTY Roundup from Murphy's because of the weather. Where there is a will, there is a way.

We have also formed an HF committee for our local Radio Club (SNARS) to encourage the shack-on-the-belt crowd to become more involved in HF. So far, interest is promising, but we still do not have a single local contest operator from this group of 300 hams.

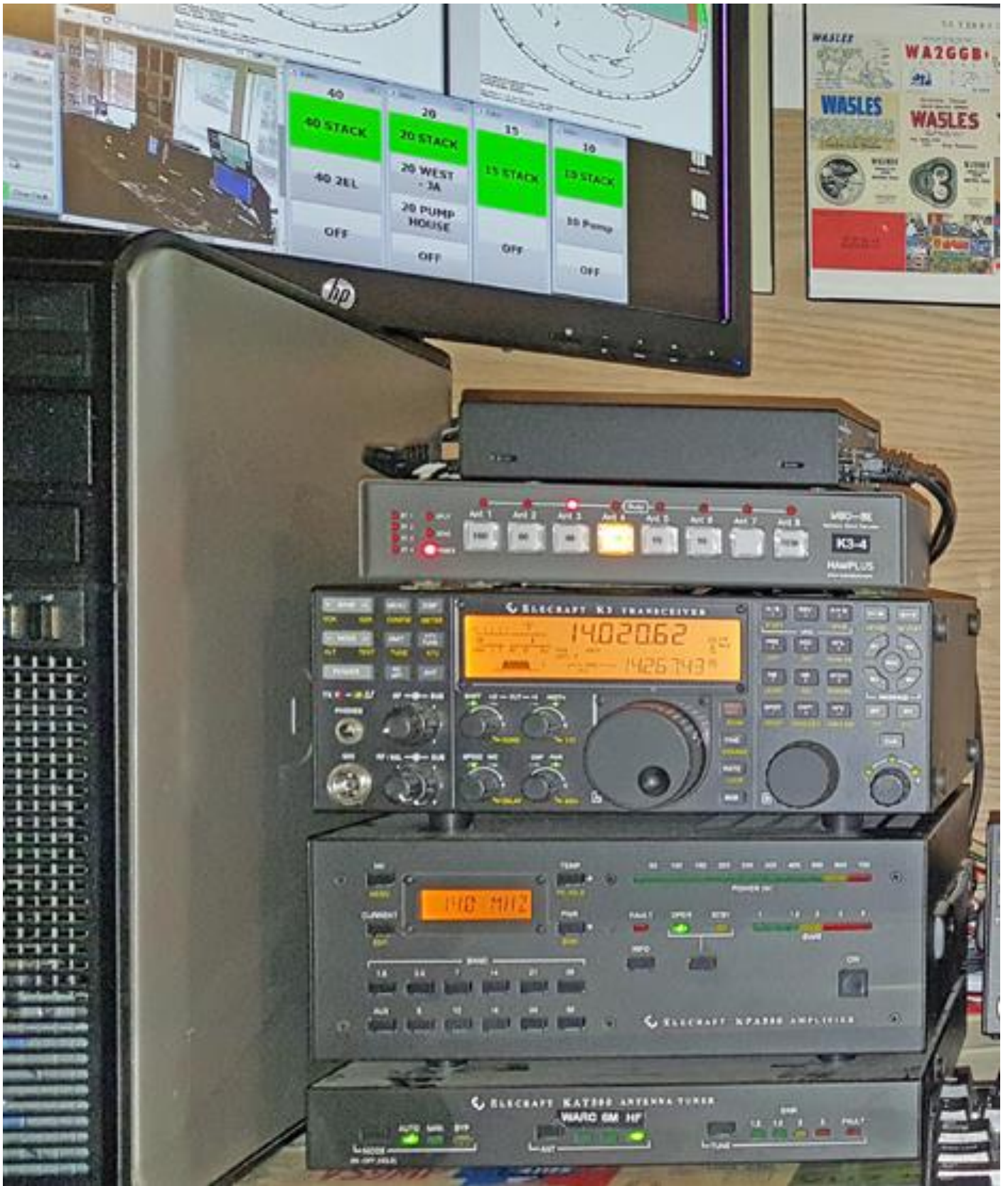
Finally, The Comstock Memorial Station is a 501c3 not for profit. When Midge and I vacate our homestead, the Special Use Permit states that the station must be dismantled and removed within six months. The only option is to endow it to another not for profit. We offered that option to ARRL and NCDXF last year and they both declined because it is a long-term commitment (hopefully).

We are also looking for recommendations for creating this endowment in the near future. The station has a certified appraised value of more than \$775,000.00. The value to another club becoming the beneficiary is likely selling off all of the assets, minus the cost of dismantling, and putting the money in their own treasury.

In the 20 years I have belonged to NCCC, we have never been shy about tackling formidable challenges. This one could be a win-win for the Club. Looking forward to your creative ideas!

Tom Taormina, K5RC
Trustee of CMS









The February NCCC meeting took place on Tuesday February 21st at Sneha Restaurant in Sunnyvale. The planned presentation by Jim K9YC had to be postponed as mother nature had other plans and the NCCC team on the Santa Cruz mountains we not able to leave their homes.

Steve W1SRD and Bob N6TV led the meeting with a open discussion on what's working, not working, member round table and a review of Bob N6TV interface box (more to come on that in a later edition).



The meeting was attended by Twenty Eight NCCC members/visitors. Andy AE6Y, Koji JP1HUJ, John K6MM, Bryan KB0A, Alex KI6EZ, Nick KZ2V, Tom N3ZZ, Ric N6AJS, Rich N6KT, Dave N6NZ, Steve N6SJ, Bob N6TV, Rick N6XI, Mike N7MH, Gary NA6O, Ton ND2T, Tom NW6P, Steve W1SRD, Scott W6CT, Jack W6FB, Rusty W6OAT, Jim W6SC, Ian W6TCP, Mike WA6O, & Matt WX5B



Gary NA6O with Koji JP1HUJ

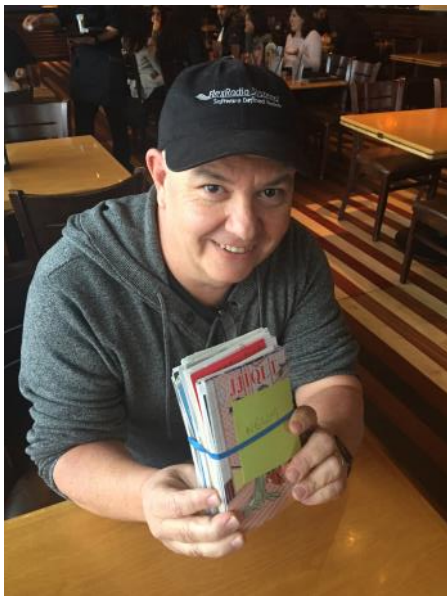


CQP Shirts—2016



CQP shirts are in and are starting to go out the door... Watch for a brown paper envelope (provided you paid g) !

N6WM—QSL Cards



< Chris N6WM, takes delivery of a patch of QSL cards

The Mother of All Filters

Gary Johnson, NA6O
Feb, 2017

If your station suffers from inter-station interference, one thing you may like to try is a high-power bandpass filter after the amplifier. While working on upgrades at N6RO, I bought the very best high-power 80 m transmitting bandpass available, the mighty 4O3A Series XL. This is no hammy-hambone filter! For \$500 you get a first-class piece of radio hardware from someone who clearly knows what he is doing and knows how to build it right. This 4.5 kW, fifth-order filter has a low loss in the passband of 0.4 dB, and at the second harmonic it's down 55 dB or more. It even comes with a printout of the performance taken on a VNA.

And it's *huge*. The custom-fabricated enclosure is robust, neatly-finished, and 100% RF-tight. Coils are fat and well-supported with Teflon bars and standoffs. Connections are wide copper straps. Capacitors are from another universe—from the Russian military I am told—and even have Cyrillic lettering on them. I have never seen such devices. If you have actually done detailed high-power filter analysis, as I have, you find that the circulating currents are extremely high, especially in the presence of a mismatch. 25 A rms or more is likely, along with several kV. While heavy-duty coils are not that difficult to make, RF capacitors in this class are nearly unobtainium especially in small quantities. Destruction comes quickly under these conditions when components are underrated! So my hat is off to Ranko for building such a robust filter with excellent performance.



The Mother of All Filters– Continued



NCCC Meetings March & April

Here are the dates and venues for March, and April. Bob W1RH is looking for presenters for the April meeting dates, of course, March is the Annual Awards meeting so we hope you can all join us there if you are not able to make any of the other meetings.

March 18th - Saturday,

11:30 AM Social Hour, 12:00 PM Lunch 12:30 PM Awards
Tied House Brewery, Mountain View, CA 94041
Program: **Annual NCCC Awards**

April 29th - Saturday,

11:30 AM Social Hour, 12:00 PM Lunch 12:30 PM Program
40 Golf Club Rd, Pleasant Hill, CA 94523
Program: TBD

Election of Officers

NCCC holds its annual election in April. The Board of Directors consists of President, Vice President/Contest Chairman, Secretary/Treasurer, Past President, and three Directors.

If you are interested in any of the BOD positions, please contact John K6MM.

In addition, a volunteer panel steps forward each year to assist the club in its many activities. We're always looking for more volunteers, so if interested, please contact any member of the current BOD.

NCCC Life Membership

NCCC Life Membership is available for a one-off payment of \$250.00

If you would like to apply for life membership, please submit your request using this link [here](#)

Each request will be reviewed by the NCCC BOD at the regular monthly BOD meeting.

For further information, contact Ian W6TCP



WORLD RADIOSPORT TEAM CHAMPIONSHIP JULY 12-16, 2018



Our way to 2018

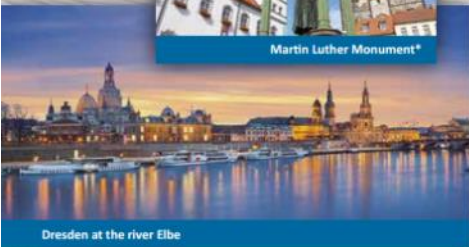
Having been elected to host the WRTC 2018 in Germany is a great honor, a thrill, and a big challenge for us. The critical tasks have been clearly defined. Dedicated and highly motivated teams are addressing the challenges.

For the competition itself we have chosen the Jessen area south of Berlin for its flatness providing level playing fields for all competitors. Jessen is strategically situated between the German capital of Berlin and such fascinating historic cities like Dresden and Leipzig.

Nearby you find important cultural attractions, e.g. the historic city of Wittenberg where Martin Luther launched the Protestant Reformation in 1517. Additionally, the scenic countryside and a lot of entertainment will make the WRTC an exciting experience for families and friends as well.



Martin Luther Monument*



Dresden at the river Elbe

* Source: Lutherstadt Wittenberg Marketing GmbH ©

We need your support!

You need deep pockets to finance such a huge event. Our preliminary cost estimates add up to close to half a million US Dollars and cannot be shouldered by the German contesting fraternity alone. We need substantial financial support of contesters from all over the world, from contest clubs, individuals and business. Any amount is welcome! We will do our level best to translate this support into an event that is worth to take part in - be it as a competitor or spectator, either on the spot or remotely via Internet. You are welcome to donate via PayPal to:

spende@wrtc2018.de

or to use wire transfer (see Web Page for details).

For US taxpayers

The World Wide Radio Operators Foundation (WWROF) is recognized by the IRS as a tax-exempt public charity. In order to be eligible for Income Tax treatment of your donation to WRTC 2018 just contribute to WRTC2018 in one of the following ways, either via PayPal to:

WRTC2018@wwrof.org

or by check - remit and mail to:

WWROF Inc. - WRTC2018 Fund
P O Box 10424
Midland, TX 79702



Note: It is important that mailed contributions include notification that the donation is specifically for WRTC2018.

Contact the WRTC Team

www.wrtc2018.de
contact@wrtc2018.de

E-Mail: contact@wrtc2018.de | Web: www.wrtc2018.de | Facebook: [wrtc2018](https://www.facebook.com/wrtc2018) | Twitter: [wrtc2018](https://twitter.com/wrtc2018)



WORLD RADIOSPORT
TEAM CHAMPIONSHIP

Welcome to Germany!



Proud bronze medalists at WRTC 2014 - Manfred Wolf, DJ5MW and Stefan von Baltz, DL1IAO (Foto: DK9IP)

Competition with Friends

Lifetime Experience

Make it happen!

Contesters' Olympics

WRTC 2018 is coming - 500 days to go

Often the WRTC is rightly referred to as the Olympic Games of Radio Sport. "Olympiad" originally meant the the period between the actual Olympic Games. There are now just 500 days in our "Olympiad" until the opening ceremony. A lot has already happened - but there is still a lot left to be done and time flies.

Current facts and figures

- 60% of needed funds have been raised
- 11 ham fairs have been visited
- 94 presentations given in clubs and at meetings
- > 40 articles published in magazines and newspapers
- 80 conference calls have taken place
- > 1,000 WWQR Awards issued
- 58,000 QSOs with D*0WRTC have taken place
- Several major sponsoring contracts are in place
- 23 international ambassadors have been assigned
- 14 national ambassadors have been assigned
- 40 Tents have been Sponsored
- 3 Teams have been Sponsored
- The qualification process is finished
- The competition rules are drafted
- 160 possible sites have been evaluated
- Antennas, masts and rotators have been selected and tested
- The first large test session has been completed

Several of the component projects are approaching a stable state however some projects are requiring more work than expected. We are on schedule and are proud to be the host. A great number of volunteers support the organisation of the WRTC and dedicate many hours of their time for this very special event.

Voices and feelings from the team

DL1RTL - Heiko (Volunteer): As a volunteer during the test day 2016 I have already helped in a team to set up a site For me WRTC 2018 offers the unique chance of being part of a genuine international championship.

DL9ZWG - Wolfhard (Treasurer): To me the WRTC 2018 means I have the opportunity to be a small part of a large group of "maniacs" who organise this extraordinary Amateur Radio Sport event in Germany. I particularly appreciate the fact that in the WRTC all teams have to compete under almost identical conditions (including similar site conditions).

DK9VZ - Wolfgang (Fundraising): I am very glad that we got the chance to present the international event WRTC here in Germany. I really don't have a lot of free time but I'd like to contribute as much as I can to the success of WRTC 2018.

DL3DXX -Dietmar (Log checking): I introduced computer aided log checking in the 90`s for the WAEDC together with DL2DN. Invented STF log description as internal log format long before Ca-brillo came up but never made it public. WRTC 2018 means for me to organize log checking of WRTC participants with the special characteristic that checking must be done during 24 hours time frame. This is a new approach for me and requires not only to get the checking software running but furthermore to install a team of helpers to define the checking procedures and to split the work among all team members with the approach to check as much as possible during the given time to make checking procedures fair for all teams.

DJ3WE (Fundraising): It is most fascinating for me that - for the first time in my life - I can and may make use of all my skills, be it amateur radio or the command of the English language as well as playing and negotiating on an international stage. There is one particular matter that occasionally makes me sweat, the high expectations worldwide regarding our organisational skills given that we are up to now a very small group, too small..

DL1MGB (President): For me as a part-time organizer of DXpeditions WRTC 2018 is like 65 DXpeditions; a major difference is that we don't have to travel anywhere in 2018, rather the world comes to us! - for me WRTC 2018 is a perfect, unrestricted, way to bring together a lot of different ham radio groups into one large project.

DJ2YA (): For WRTC2018 I will be doing my best to provide the same "level playing field" for each location as well as helping with translations into English. As a WRTC-veteran (San Francisco, Bled and Florianapolis) I consider WRTC 2018 in Germany as the pinnacle event.

DL4ST - Steffen (Volunteer): As a member of the DARC district board for Saxony-Anhalt I am proud that a portion of our members are committed to taking an active role in the organisation and preparation of the WRTC.

DM6DX - Robby (Ambassador-Berlin / Camping): As regional ambassador I have recruited a complete team of volunteers... ... the accommodation requirements are on track and before the test days in June we will have chosen the final tent model. ...the chairs can be evaluated soon. Just purchasing 130 suitable desk lamps has proved to be quite a challenge.

DK4QT - Dieter (AC-Member): I would like use my capabilities to support the WRTC team and help to ensure a successful WRTC 2018. During 2017 I will advertise the event to possible WRTC helpers in DARC District N.

DJ9MH - Hajo (WRTC Award): Since the WRTC in California I have followed this championship attentively and worked its competitors. In Bled my xyl and I had the chance to have a closer look at the event. I attended the initial meeting of "WRTC 2018 e.V" which resulted in my allocation as an WRTC award manager and administrator of the special WRTC call signs

DJ6DC (Consultant): I am the designer of the basic concept "outdoor Facilities" I manage all interface definitions and operational plans and where possible also financial contributions... for me the WRTC 2018 is the pinnacle and a trend-setting event.

DF8XC (Volunteer): WRTC 2018 gives me the chance to get to know the leading contesters.

DL2MLU (PR): To contribute to something great, to be there and live the experience.

DL8OBF - Uwe (AC-Member): I am a member of the Advisory Committee for the WRTC 2018. I am also responsible for the competition-rules and response to any related questions raised. I am pleased to see the WRTC in Germany and to have the opportunity to display our hospitality to the visitors..

DL2RSF - Wolfgang (Volunteer): After applying to become a volunteer I joined a team on the test day at Jessen. For me erecting antennas is particularly exciting and interesting. Good health provided I'll certainly take part in the test days in 2017 and in any case in the actual event in 2018. Once more I'll be looking forward to making friends with other volunteers and participants

DL9GFB - Franz (Consultant): I will be available as needed, to help with any "jobs" during WRTC 2018. WRTC 2018 = Most important event for Ham Radio in Germany!

DL2MLU Luise (Fundraising - Kacheln): For me WRTC means to contribute to something great, to be part of it and enjoy the experience

DK1DSA Ralf (Volunteer, Hospitality): As a radio amateur in Wittenberg I'm happily looking forward to such a great event in my home region. I am curious about the world's best contesters and this very exciting contest with its field-day characteristics, of which, until now, I have only been able to read about. In 2018 I'll be volunteering there as everything can be reached on foot or bicycle.

DL6RAI - Ben (IT-Manager): Providing IT services before and during WRTC 2018 requires special know-how. We are happy to have built a great team that maintains several different web sites, provides 65 logging computers for the online-scoring function and created a custom web-based application to manage data and documents of the 65 different sites. Expectations are high and we are working on meeting them.

DM5EE - Uli (Volunteer): WRTC 2018 will put the German amateur radio community in the limelight and many friends from all over the world will gather here for the competition. It is a huge event that will present many challenges preparing for it but which will be a lifetime experience that I am anxiously looking forward to.

DH8BQA - Olli (PR-Team): Wrote few articles on WRTC technical related matters for German HAM magazines cqDL and FUNKAMATEUR. Assisting antenna director every now and then. Wish I had much more time available for WRTC organization. WRTC 2018 will be THE biggest event in German Amateur Radio history, at least from a contesting perspective.

About WRTC 2018

The World Radiosport Team Championships (WRTC) are held every four years and assemble more than 60 two-operator-teams of the world's best radio contesters on a level playing field. Quite different from their usual contesting they must use identical equipment in the same geographical region eliminating all variables except their personal skills. Previous WRTCs were held in Seattle/USA (1990), San Francisco/USA (1996), Slovenia (2000), Finland (2002) Brazil (2006) Russia (2010) and New England/USA (2014).

Point Generator Profile

By Bob, W1RH

Everyone knows Rusty! He's been part of the glue that has held NCCC together for many years. He also generates points for the club in virtually all of our Focus Contests, as well as many others.

Below are the particulars:

Name/Call Sign: Rusty Epps, W6OAT

Past calls: K4BVD, N6SF

Location: Emerald Hills (Redwood City), CA

How much property do you have? 50 x 100 foot lot

Describe your antenna system: SteppIR DB-18E, Dipole for 80m

Current: As above

Future: As above

What's in your shack? Elecraft K3 + P3, Alpha 9500, Nye Viking Tuner

What are your previous QTH's? San Francisco, Los Altos Hills, Columbus (GA)

If you're working, what is your career? If not, what was your career? Attorney

Married? Yes Kids? No Grandkids? No

How many DXCC entities have you worked? 373

What's your favorite contest? California QSO Party

Any tips for contesters? Have fun

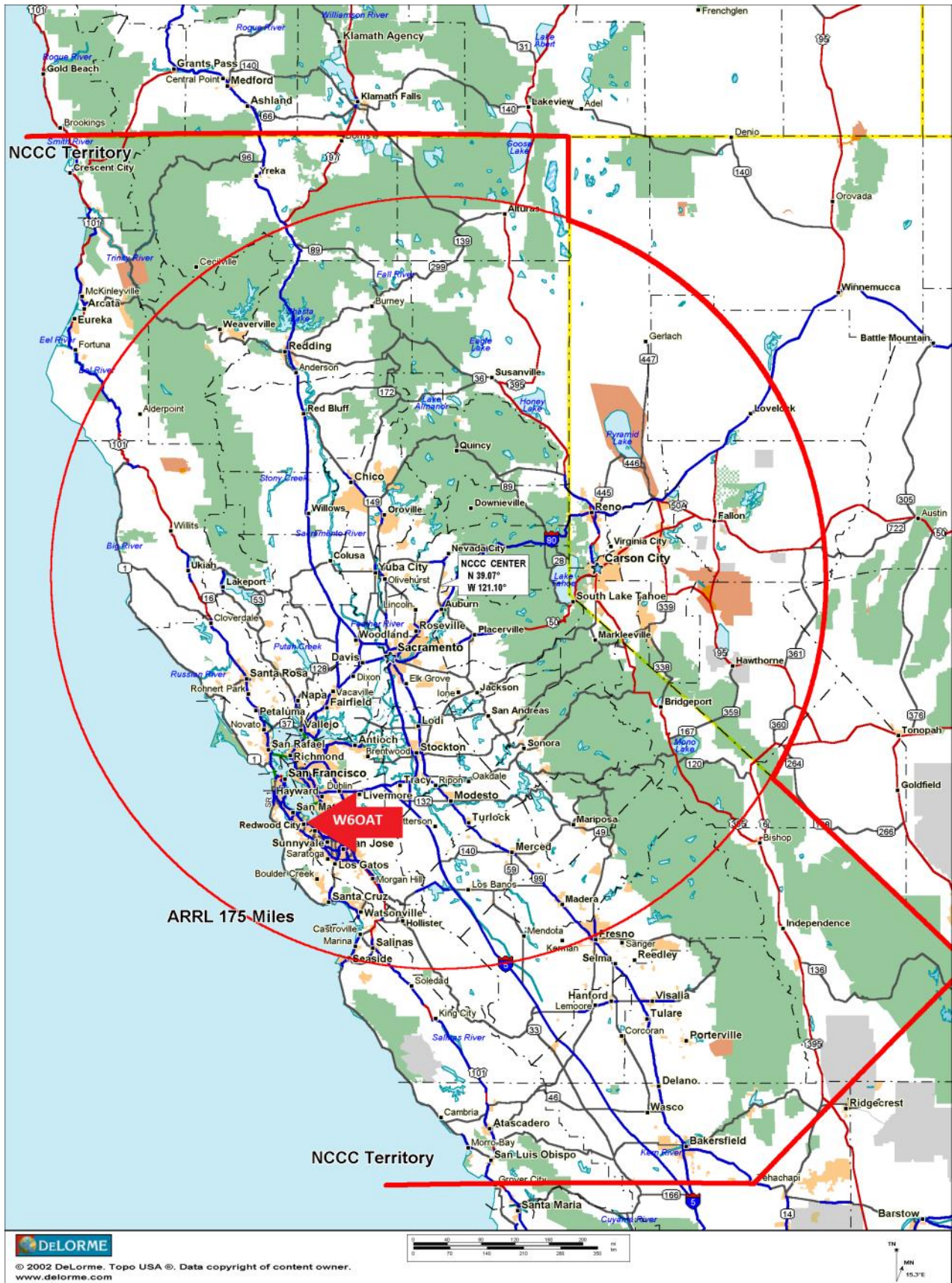
What would you like to see changed in NCCC? I'd like to see more members become actively involved in the club

Any other hobbies besides ham radio? Tournament bridge, travel





W6OAT SteppIR DB-18E



W6OAT Location

TUBE OF THE MONTH

Visit the museum at N6JV.com

Norm N6JV

WE 215A

There are those who believe that the miniaturization of vacuum tubes was one of the results of WWII. They missed a war. Radio equipment was used in WWI aircraft and in the trenches of the Western Front. The need for tubes that operated on very small values of battery power was the reason that Western Electric began research on miniature tubes during that War. The VT-5 or 215A was ready for production in 1919 so was never actually used in the War. The "Peanut" tube operated with 1 volt on the filament at .25 amp and 100 volts at 2 ma on the plate. The tube is 2.50 in long and .50 inches in diameter and required its own special bayonet socket.

Up until 1930, the 215A was used in a variety of equipment including small TRF and super heterodyne receivers, crystal oscillators in transmitters and audiometers. Western Electric made very good equipment and just because its old isn't always a reason to use something else. Western Electric finally refused to provide the Navy with the tubes in 1983 after 64 years of production.

TUBE OF THE MONTH

Visit the museum at N6JV.com

Norm N6JV



Election of Officers

NCCC holds its annual election in April. The Board of Directors consists of President, Vice President/Contest Chairman, Secretary/Treasurer, Past President, and three Directors.

If you are interested in any of the BOD positions, please contact Bob W1RH.

In addition, a volunteer panel steps forward each year to assist the club in its many activities. We're always looking for more volunteers, so if interested, please contact any member of the current BOD.

Northern California Contest Club Reflector—Guidelines

This reflector is devoted to the discussion of contesting.

This includes contests, station building, dxpeditions, technical questions, contesting questions, amateur radio equipment wants/sales, score posting, amateur radio meetings/conventions, and membership achievements.

This does not include personal attacks, politics, or off-subject posts which will be considered a violation of the Guidelines.

Violations may result in removal of the violator from the reflector and possibly from club membership in good standing.

JUG Articles Wanted!

Without your help we cannot reproduce a quality newsletter so please consider submitting a suitable article!

We welcome any and all relevant articles for inclusion in the JUG.

Deadline is 7 days before month end. Preferred format is MS Word, Arial 12 point and pictures should be full resolution. Send your material to Ian, W6TCP at w6tcpian@gmail.com Don't worry about the formatting, we can take care of that if necessary !



Contest Calendar— March page 1

QRP Fox Hunt	0200Z-0330Z, Mar 1
Phone Fray	0230Z-0300Z, Mar 1
CWops Mini-CWT Test	1300Z-1400Z, Mar 1 and 1900Z-2000Z, Mar 1 and 0300Z-0400Z, Mar 2
UKEICC 80m Contest	2000Z-2100Z, Mar 1
NRAU 10m Activity Contest	1800Z-1900Z, Mar 2 (CW) and 1900Z-2000Z, Mar 2 (SSB) and 2000Z-2100Z, Mar 2 (FM) and 2100Z-2200Z, Mar 2 (Dig)
NCCC RTTY Sprint	0145Z-0215Z, Mar 3
QRP Fox Hunt	0200Z-0330Z, Mar 3
NCCC Sprint	0230Z-0300Z, Mar 3
ARRL Inter. DX Contest, SSB	0000Z, Mar 4 to 2400Z, Mar 5
Wake-Up!QRP Sprint	0600Z-0629Z, Mar 4 and 0630Z-0659Z, Mar 4 and 0700Z-0729Z, Mar 4 and 0730Z-0800Z, Mar 4
Open Ukraine RTTY Championship	1800Z-2059Z, Mar 4 (Low Band) and 2100Z-2359Z, Mar 4 (Low Band) and 0800Z-1059Z, Mar 5 (High Band) and 1100Z-1359Z, Mar 5 (High Band)
UBA Spring Contest, CW	0700Z-1100Z, Mar 5
DARC 10-Meter Digital Contest	1100Z-1700Z, Mar 5
SARL Hamnet 40m Simulated Emerg Contest	1200Z-1400Z, Mar 5
NSARA Contest	1200Z-1600Z, Mar 5 and 1800Z-2200Z, Mar 5
RSGB 80m Club Championship, Data	2000Z-2130Z, Mar 6
ARS Spartan Sprint	0200Z-0400Z, Mar 7
AGCW YL-CW Party	1900Z-2100Z, Mar 7
QRP Fox Hunt	0200Z-0330Z, Mar 8
Phone Fray	0230Z-0300Z, Mar 8
CWops Mini-CWT Test	1300Z-1400Z, Mar 8 and 1900Z-2000Z, Mar 8 and 0300Z-0400Z, Mar 9



Contest Calendar— March page 2

AWA John Rollins Memorial DX Contest	2300Z, Mar 8 to 2300Z, Mar 9 and 2300Z, Mar 11 to 2300Z, Mar 12
NCCC RTTY Sprint	0145Z-0215Z, Mar 10
QRP Fox Hunt	0200Z-0330Z, Mar 10
NCCC Sprint	0230Z-0300Z, Mar 10
RSGB Commonwealth Contest	1000Z, Mar 11 to 1000Z, Mar 12
SARL VHF/UHF Analogue/Digital Contest	1000Z, Mar 11 to 1000Z, Mar 12
South America 10 Meter Contest	1200Z, Mar 11 to 1200Z, Mar 12
F9AA Cup, SSB	1200Z, Mar 11 to 1200Z, Mar 12
SKCC Weekend Sprintathon	1200Z, Mar 11 to 2400Z, Mar 12
Oklahoma QSO Party	1400Z, Mar 11 to 0200Z, Mar 12 and 1400Z-2000Z, Mar 12
AGCW QRP Contest	1400Z-2000Z, Mar 11
Stew Perry Topband Challenge	1500Z, Mar 11 to 1500Z, Mar 12
EA PSK63 Contest	1600Z, Mar 11 to 1600Z, Mar 12
QCWA QSO Party	1800Z, Mar 11 to 1800Z, Mar 12
TESLA Memorial HF CW Contest	1800Z, Mar 11 to 0559Z, Mar 12
Idaho QSO Party	1900Z, Mar 11 to 1900Z, Mar 12
QRP ARCI Spring Thaw SSB Sprint	2000Z-2359Z, Mar 11
North American Sprint, RTTY	0000Z-0400Z, Mar 12
UBA Spring Contest, 2m	0700Z-1100Z, Mar 12
WAB 3.5 MHz Phone	1800Z-2200Z, Mar 12
Wisconsin QSO Party	1800Z, Mar 12 to 0100Z, Mar 13
QRP Fox Hunt	0100Z-0230Z, Mar 15
Phone Fray	0230Z-0300Z, Mar 15
CWops Mini-CWT Test	1300Z-1400Z, Mar 15 and 1900Z-2000Z, Mar 15 and 0300Z-0400Z, Mar 16
RSGB 80m Club Championship, CW	2000Z-2130Z, Mar 15
NAQCC CW Sprint	0030Z-0230Z, Mar 16
QRP Fox Hunt	0100Z-0230Z, Mar 17
NCCC RTTY Sprint	0145Z-0215Z, Mar 17



Contest Calendar— March page 3

NCCC Sprint	0230Z-0300Z, Mar 17
BARTG HF RTTY Contest	0200Z, Mar 18 to 0200Z, Mar 20
Russian DX Contest	1200Z, Mar 18 to 1200Z, Mar 19
Virginia QSO Party	1400Z, Mar 18 to 0200Z, Mar 19 and 1200Z-2400Z, Mar 19
Louisiana QSO Party	1400Z, Mar 18 to 0200Z, Mar 19
AGCW VHF/UHF Contest	1400Z-1700Z, Mar 18 (144) and 1700Z-1800Z, Mar 18 (432)
Feld Hell Sprint	2000Z-2159Z, Mar 18
UBA Spring Contest, SSB	0700Z-1100Z, Mar 19
Run for the Bacon QRP Contest	0200Z-0400Z, Mar 20
Bucharest Contest	1800Z-2059Z, Mar 20
CLARA Chatter Party	1700Z, Mar 21 to 1700Z, Mar 22 and 1700Z, Mar 25 to 1700Z, Mar 26
SKCC Sprint	0000Z-0200Z, Mar 22
QRP Fox Hunt	0100Z-0230Z, Mar 22
Phone Fray	0230Z-0300Z, Mar 22
CWops Mini-CWT Test	1300Z-1400Z, Mar 22 and 1900Z-2000Z, Mar 22 and 0300Z-0400Z, Mar 23
RSGB 80m Club Championship, SSB	2000Z-2130Z, Mar 23
QRP Fox Hunt	0100Z-0230Z, Mar 24
NCCC RTTY Sprint	0145Z-0215Z, Mar 24
NCCC Sprint	0230Z-0300Z, Mar 24
FOC QSO Party	0000Z-2359Z, Mar 25
CQ WW WPX Contest, SSB	0000Z, Mar 25 to 2359Z, Mar 26
UBA Spring Contest, 6m	0600Z-1000Z, Mar 26
QRP Fox Hunt	0100Z-0230Z, Mar 29
Phone Fray	0230Z-0300Z, Mar 29
CWops Mini-CWT Test	1300Z-1400Z, Mar 29 and 1900Z-2000Z, Mar 29 and 0300Z-0400Z, Mar 30
UKEICC 80m Contest	2000Z-2100Z, Mar 29
QRP Fox Hunt	0100Z-0230Z, Mar 31
NCCC RTTY Sprint	0145Z-0215Z, Mar 31
NCCC Sprint	0230Z-0300Z, Mar 31

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IC-7600 | All Mode Transceiver

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IC-7200 | HF Transceiver

- 160-10M • 100W • Simple & tough with IF DSP • AGC Loop Management • Digital IF Filter • Digital Twin PBT • Digital Noise Reduction • Digital Noise Blanker • USB Port for PC Control



IC-7100 | All Mode Transceiver

- HF/50/144/430/440 MHz Multi-band, Multi-mode, IF DSP • D-STAR DV Mode (Digital Voice + Data) • Intuitive Touch Screen Interface • Built-in RTTY Functions



ID-5100A | VHF/UHF Dual Band Digital Transceiver

- Analog FM/D-Star DV Mode • SD Card Slot for Voice & Data Storage • 50W Output on VHF/UHF Bands • Integrated GPS Receiver • AM Airband Dualwatch • FM Analog/DV Repeater List Function

ID-51A | VHF/UHF Dual Band Transceiver

- 5/2.5/1.0/0.5/0.1W Output • RX: 0.52-1.71, 88-174, 380-479 MHz** • AM/FM/FM-N/WFM/DV • 1304 Alphanumeric Memory Chls • Integrated GPS • D-STAR Repeater Directory • IPX7 Submersible



TH-F6A | 2M/220/440

- Dual channel receive • .1 - 1300 MHz (cell blocked) RX • FM, AM, SSB • 5W 2M/220/440 TX, FM • 435 Memories • Li-Ion Battery

KENWOOD



TS-590SG | HF/50MHz Transceiver

- Equipped with 500 Hz/2.7 kHz roofing filter as standard • ALC derived from TS-990S eliminating spike issues • Antenna output function (shared with DRV connector) • CW - morse code decoder function



TM-D710G | 2M/440 Dualband

- V+V/V+U/U+U operation • Built-in GPS • Built-in TNC for APRS & DX-Cluster operation • 50W 2M & UHF • 1,000 memories • Dual receive • Green or amber backlight colors • Latest APRS firmware w/new features • Sky Command II remote functions



TM-V71A | 2M/440 DualBand

- High RF output (50W) • Multiple Scan • Dual receive on same band (VxV, UxU) • Echolink® memory (auto dialer) • Echolink® Sysop mode for node terminal ops • Invertible front panel • Choice of green/amber for LCD panel • 104 code digital code squelch



TM-281A | 2 Mtr Mobile

- 65 Watt • 200 Memories • CTCSS/DCS • Mil-Std specs • Hi-quality audio



FT-60R | 2M/440 5W HT

- Wide receiver coverage • AM air band receive • 1000 memory channels w/alpha labels • Huge LCD display • Rugged die-cast, water resistant case • NOAA severe weather alert with alert scan

YAESU
The radio



FT-991 | HF/50MHz/2M/440 Transceiver

- 160 M-440MHz - SSB/CW/FM/C4FM Digital/AM/RTTY/PSK • 100 W (2M/440: 50 Watts) • 3.5" TFT full-color touch panel operation • High speed spectrum scope • Roofing filters: 3kHz & 15kHz • 32-bit high speed floating point IF DSP



FTDX1200 | 100W HF + 6M Transceiver

- Triple Conversion Receiver With 32-bit Floating Point DSP • 40 MHz 1st IF with selectable 3 kHz, 6kHz & 15 kHz Roofing Filters • Optional FFT-1 Supports AF-FFT Scope, RTTY/PSK31 Encode/Decode, CW Decode/Auto Zero-In • Full Color 4.3" TFT Display



FT-450D | A100W HF + 6M Transceiver

- 100W HF/6M • Auto tuner built-in • DSP built-in • 500 memories • DNR, IF Notch, IF Shift



FTM-400DR | 2M/440 Mobile

- Color display-green, blue, orange, purple, gray • GPS/APRS • Packet 1200/9600 bd ready • Spectrum scope • Bluetooth • MicroSD slot • 500 memory per band



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