

ROCHESTER

DX

ASSOCIATION

rdxa.com



Regular Meeting

January 17th 19:00 local

300 Jay Scutti Boulevard
Gander Mountain
Meeting Room

How to Maximize Your 100 Watts

Back by popular demand, we're having another "ask the experts" roundtable discussion, this time focused specifically on different ways we can maximize the effectiveness of our 100W transceivers.

Many experienced ops in the club used to or still run barefoot and have learned many ways to get the most out of a modest station. With many DX and contest Qs in their logs, they know from whence they speak. Come hear what they've done that you can do yourself to improve your station.

Social after the Meeting

Scotch & Sirloin
Winton Plaza

other. Also, at this point in the sunspot cycle, I want to be able to have a greater impact on those bands.

At the Board meeting last night, we discussed the number of folks who have not renewed their membership. I'm sure that there are some who don't wish to renew for personal reasons. I'll be sending out follow-up email(s) trying to encourage those folks whose membership has lapsed, to ante up and rejoin the fold. Regrettably, those who don't chose to renew their membership will be removed from the RDXA mailing list (but not forgotten).

Chris, K2CS will be circulating a sign-up sheet for the usage of W2RDX call at the January meeting. As Chris mentioned in the December newsletter, the goal is to get DXCC and WAS for the club, by the 60th anniversary. Take a look at the contest calendar, and pick some time to use the call. Just remember to work within the constraints of your license class (which as most of us are Extras, is not an issue). There are plenty of smaller contests out there, state QSO parties, etc. So, pick some time, and use the call!

I wanted to direct your attention to a website I found interesting. The site is: www.mods.dk. In addition to modifications broken down by manufacturer and model (try at your own risk of course), there is a section of user *and* service manuals! I downloaded a PDF file of the IC-765 user manual, just for grins! People are limited to 2 downloads a day. When I downloaded the user manual (~4M) it just took a couple minutes with a broadband connection. As I have both the service and user manuals, I didn't waste bandwidth to see how long the service manual would take. Try this service if you ever pick up a bargain rig or TNC (what are they?) at a hamfest and need documentation. It looks like the manuals are scanned, then converted to PDF files – but what the heck, for free? It's right up a Ham's alley!

President's Soapbox

By Dave Wright - N2CK



Hello everyone,

I hope the wx continues on in this mild fashion. Here it is mid-January, and we don't have any white stuff on the ground! It's almost like we got an additional grant of a month to work on antennas. Thanks to some tower work by Doug, N2BEG I now have an additional antenna for 80 and 40, plus 160 as well. Watch the scores from the N2CK super-station climb now! Actually,

I'm looking forward to having an additional antenna on 80/40. I'm sure there will be times when one will perform better than the

Ok, that's enough mindless drivel for this month. Hopefully I'll see a bunch of you next week. Additionally, I hope lots of you stragglers contact Charlie and re-up. We really don't want to lose you folks. Where else can you tap into this much combined expertise, frivolity, and abuse for a mere \$15.00 a year? Why, the answer is – only RDXA!

Dave, N2CK

January Contests

ARRL Straight Key Night, CW----- 1 Jan
ARRL RTTY Roundup, RTTY----- 7, 8 Jan

NAQP, CW-----	14, 14 Jan
UK DX RTTY, RTTY-----	21, 22 Jan
CQ 160 Meter Contest, CW-----	28, 29 Jan
BARTG RTTY Sprint, RTTY-----	28, 29 Jan

More Contest Info <http://www.sk3bg.se/contest/index.htm>

February Contests

Mexico Int'l. RTTY Contest, RTTY-----	4, 5 Feb
CQ WW RTTY WPX, RTTY-----	11, 12 Feb
RSGB 1.8 MHz Contest, CW-----	11, 12 Feb
ARRL Int'l DX, CW-----	18, 19 Feb
CQ WW 160m Contest, SSB-----	25, 26 Feb

Contest Commentary

N2CK, ARRL RTTY Roundup – I played a bit in the RTTY roundup last weekend. I ended up with 167 Qs, broken down as follows: 80M – 33, 40M – 62, 20M – 63, and 15M – 9. I didn't work as much DX as I would have expected. Japan, England, Ireland, Mexico, Columbia, Slovenia (is there ever a contest those guys don't enter?), and Aruba made the log. I worked the following RDXAers: K0SM, K8FC, K1PY, K2MP and W1TY. I had some fun with Vic, when I sent him a signal report something to the effect of 236. I did end up giving him an "official" report of 599 though. I had nice chats with Vic, Joe, and Ed. I did say hi to Andy, but I'm not sure he knew who was at the other end. Most of my operation was search and pounce, though on Sunday afternoon I tried CQing a little. I had a nice little run going on 7.055, where I worked 9 stations in a row. That's when W1TY found me. Imagine my surprise when I continued on CQing after working Rick, that I saw someone else calling CQ on my frequency! Reading the MMTTY display I can **clearly** read "DE W1TY W1TY QRZ"! Talking to Rick later, it seems he tried to assist me by posting a spot for me on the cluster. After he returned to the test, he (mistakenly) thought that my frequency was his calling frequency. As I was frequency agile, and not working single-band, I wandered up the band a little and found another spot where I worked another 24 stations before wandering back to 20m to see what I could find there. All-in-all a fun contest, with the added benefit of having the opportunity to chat with, and also have some fun with (both during and after the contest) fellow club members. When you see Rick, suggest that he needs to check the edges of his passband every once in a while!



K8FC, ARRL RTTY Roundup – As usual, great contest. I look forward to the RTTY RU every year as it is a very relaxing contest and fun to do. Only got in about 19 hours this year because of other commitments but never the less, really enjoyed it.

Thanks to my Colorado friends who gave me a point. I would also like to congratulate Steve Foster, KT0DX on his excellent RTTY RU finish for 2006, he should probably be amongst the leaders I suspect.

The bands were not spectacular here when I operated. I wish I could have spent more quality time on 80 and 40. 10 meters was never open the times that I checked.

Score: total: 727 Qs; State/Prov = 53; Countries = 32; total score = 61,795. Thanks again to all the folks who gave me a QSO.

K0SM, ARRL RTTY Roundup – I hadn't done this contest since 1998, and it was a bit of a last-minute prep—I was hanging a dipole during the first hour of the contest. I think I might just have to try to extend Christmas vacation next year just for this. I invited a new ham over because he had never done a contest, nor RTTY, so that is why I'm M/S-low. There was only one radio in the room, so the 10 minute rule was a pain in the butt occasionally. I'm excited about what this station could do if I operated the full 24 hours SOLP and had a real 20m antenna. My country count was way low compared to what it was back in the 90s when the 204-BA was on the tower. Some of the missing countries are too embarrassing to mention. Also, keep in mind that being in the middle of the country has its advantages, not the least of which is that I'm one hop closer to all those Californians.

Highlights: Working first EU on 80 RTTY (that never happens) and working a bunch of JAs on 40m (never worked JA from here on 40). I got the rate meter to hit 187/hr. for the last 10 during an 80m run. I'm curious if any of you did SO2R in this contest? It seems it would be a big help when the rate starts to drop on Sunday. For those of you who ran multiple decoders, any wisdom to share? I didn't get around to that. Maybe next year...

N1OKL, ARRL RTTY Roundup – Looking at the cluster spots about an hour after the contest started and checking what I could hear, I decided to fire up the rigs on 15 meters. I worked the band for about 3 hours, mostly S&P. Most contacts were stateside Midwest and west coast, with a sprinkling of Europeans and South Americans thrown in. I also worked a ZL, but though I heard Hawaii, he could not hear me. I adjourned for a short, late afternoon nap and to barbeque a couple of steaks for the XYL and myself for dinner...then back to the contest at about 20:00 local. 20 meters was still active, so I shifted my activity there, again mostly S&P, but with a few nice calling runs. By 22:00 local, 20 was all but dead, so I moved to 40 meters. On 40m I came across both N2OPW and W1TY working S&P, but never hooked up with either. I was working my way up the band in S&P mode when I all of a sudden didn't get an immediate response from my intended target in the Midwest. Hmmm. I hit the send key again, and happened to glance over at the wattmeter. Oops! No power out and the SWR needle was jerking wildly around 5:1 and up! My first thought was that my antenna had fallen out of the trees. A quick look outside showed that all was well. I next thought that a field mouse had somehow gotten into the enclosure that houses my ladder line lightning arrestor just outside the basement window and shorted the line (we have *lots* of field mice here). Nope, no well-done mouse. For the next couple of hours, I tried to find the solution by switching antennas, changing coax jumpers etc. No joy, so I gave up and hit the sack, thinking that the problem must be outside and that I would have a better chance tracking it down in the daylight.

Sunday morning arrived, and with daylight I headed outside to see what I could see. I spent all morning trying to find a problem with the antennas and feedlines, but all was well. Shortly after noon, by switching in some fixed capacitance, and resetting variable capacitance and inductance, I was able to find a new setting on my balanced tuner that worked OK on 80 meters with the 80/160 dipole. But I still could not get the 40-10 meter extended lazy-H to take power at all. 'Well, I can at least finish the contest on 80 meters,' I thought. Signals were starting to come up on 80 by about 16:00 and I worked what I could hear S&P. By 18:00 there seemed

to be enough signals to make calling CQ worthwhile, and I gave it a shot. I had some nice runs, including a quick chat with K2MP.

Everything else in the station held up on 80m until the end of the contest. I haven't scored my effort yet as I have to do this manually. (The MMTTY logging facility does not appear to provide scoring capability.) I probably have about 200 QSOs in the log, with a dozen or so DXCC entities and maybe half the states and provinces.

By late Sunday night I had also figured out what happened to my antennas. In fact, it wasn't the antennas at all; it was the tuner. The Palstar balanced tuner I use has two relays: one for switching in additional fixed capacitance and the other for switching either the variable capacitance or inductance (I forget which) from one side of the circuit to the other. At 1 kW RTTY, the contacts in these relays are carrying more than their design current...even though the tuner itself is rated for 1500 Watts. So, I burned out one of the sets of relay contacts using my preferred settings. The reason I was able to get back on 80m was because (luckily) I found an alternate group of settings, using the opposite relay contacts, that also provided a match. According to the guys at Palstar, what I need if I am going to run 1kW RTTY is their re-engineered balanced tuner that has open frame relays with 45 amp, coin silver contacts.

Live and learn...

AF2K, ARRL 10 Meter – This Contest in December was a genuine struggle at times on a real quirky band. Nevertheless, it takes a contest to activate 28 MHz and bring some life to it. Managed to rack up 387 SSB Qs, only a dozen more than 2004s effort, and 75 mults, identical to last year's, of which 25 were DX entities. Propagation was totally strange at times, plus band conditions often resembled 6 meters. But did have fun—and that's what matters. Have we hit bottom yet in the Cycle?

Propagation *AD5Q's notes from Cycle 22, Jan 1995*

Solar Flux Range 73 – 97

Summary – January is the coldest month of the year, and also has the lowest MUFs. This combined with the low solar activity leaves us with little remaining activity on 15 meters. East/west paths are open, so Africa is still workable. Few signals are coming through from Europe, and we have reached a stage where Europe is more easily worked on 80m than on 15m. 20 meters is not in good shape, and most activity is along the grayline paths in the morning and evening.

Low Bands – This is turning into a great year for lowband work. Most of the attention is focused on 80 and 75 meters, even to the extent that activity is down on 40m. 40m is certainly in excellent shape, its just that on 80m one can have a competitive signal with a few tall trees and wire antennas. On 40m, a tower and beam is more of a necessity to get the most out of the band. Most of the lowband activity is in the evening, and we no longer have to wait up for the EU sunrise peak which occurs after midnight.

80m (CW) is a crowded band in Europe, but much of the activity is local. The louder EU stations are able to work quantities of W/VE stations because we mostly run QRO here. Stateside ops are mostly tuning the band looking for DX to work, rather than CQing and running. This is probably because most of us are alligators that can only work what we can hear. The band doesn't sound crowded here, except on the frequencies of DX stations where there are pileups. The same is mostly true on 160m: the EU stations do most

of the running. Yes this is a good year for 160m (even I can hear the louder Europeans on my noisy delta loop).

DXpeditions – As I write this, the S. Georgia expedition is on. This invites comparison with the Peter Island operation of a year ago. The most noticeable difference is that signals are weaker, and this suggests they are less well equipped with antennas and amps. Most of the activity has been on 40m and 80m, with no spots on 15m thus far. Perhaps 15m isn't opening at all down there. Signals have been good on 30 meters. Most activity has been on CW, where this country is especially needed.

73, de Roy - AD5Q / Houston
<http://www.qth.com/ad5q/>

Twenty-seven Day Space Weather Outlook Table

Issued 2006 Jan 10

US Dept. of Commerce NOAA

UT Date	10.7cm Radio Flux	Planetary A Index	Largest Kp Index
2006 Jan 11	78	5	2
2006 Jan 12	78	5	2
2006 Jan 13	78	5	2
2006 Jan 14	78	5	2
2006 Jan 15	78	5	2
2006 Jan 16	80	8	3
2006 Jan 17	80	5	2
2006 Jan 18	80	5	2
2006 Jan 19	80	3	1
2006 Jan 20	85	3	1
2006 Jan 21	85	5	2
2006 Jan 22	85	5	2
2006 Jan 23	85	15	3
2006 Jan 24	85	15	3
2006 Jan 25	85	8	3
2006 Jan 26	85	8	3
2006 Jan 27	80	10	3
2006 Jan 28	80	5	2
2006 Jan 29	75	5	2
2006 Jan 30	75	5	2
2006 Jan 31	75	3	1
2006 Feb 1	75	3	1
2006 Feb 2	75	5	2
2006 Feb 3	75	8	3
2006 Feb 4	75	8	3
2006 Feb 5	75	5	2
2006 Feb 6	75	8	3

Topic of the Month

DXpedition Dreams

In this month's Topic of the Month column, RDXA members muse about being the DX as a member of a ham radio DXpedition.

Dave, N2CK – Keeping with the theme of where would you go if you could choose a DX expedition site – right now, I suspect I would find a warm destination (even though we haven't really experienced winter). I'm not sure I could find a remote, desolate cold climate inviting right now. Perhaps this is a side effect of lack of sunlight. I just sat back to ponder the question of where I would go, should money and time not be an option. My decision? New Zealand. It's in the Southern hemisphere, so it's summer there now. It's reasonably populated so there are some creature comforts (like power, and adult beverages!). And it's a place I haven't worked on anything but 10M (and confirmed too – quickly

determined via a DX4WIN query). Of course, I would have to examine propagation predictions, etc. so I could pick the best time/bands to work you folks back home.

DX Logbook

By Chris Shalvoy - K2CS
Atlantic Division DXAC



TO RADIO K2CS
 CONFIRMING OUR SSB QSO
 OF 22 12 05 AT 0035 GMT
 ON 5.403.50 MHz
 UR RST 5/4
 RX TS570P
 TX _____
 ANT INVERTED V DIPOLE
 INPUT 180 w w

Hi Chris, nice to have made the contact. my info on QRZ OK. Hope to meet again Happy New Year.
73.
Richard.

G3ZGP confirms QSO with K2CS on 60m.

See you in the pileups.

Best DX es 73

Worldwide 5MHz Frequency and Channel List

This information on worldwide 60 meter channels was excerpted from a post by Bonnie Crystal, KQ6XA on QRZ.com Ed.

The use of 5 MHz by amateur radio operators is expanding into more countries, with emergency channels, propagation experiment operation, secondary status, and normal amateur use. Australia's amateur radio organization, the Wireless Institute of Australia, is the most recent addition to 5MHz. WIA now has a licence for two new 5MHz channels in emergency situations involving the Wireless Institute Civil Emergency Network WICEN, using non-amateur call signs and type-approved radios that are common in Australian outback HF land mobile.

Propagation on 5MHz fills in the distance gap between 40 metres and 80 metres, especially during morning and evening hours. It also provides different band openings during winter and at higher latitudes than 40 metres. Here is a recently updated list of 5MHz channels, bands, and frequencies related to amateur radio (as of December 2005).

Channel	Frequency†	Location	Remarks
102.0	5102.0 kHz	Australia	WIA/WICEN emergency
167.5	5167.5	Alaska	Emergency
194.5	5194.5	Germany	DRA5 beacon
250.0-310.0	5250-5310	Bangladesh	
258.5	5258.5	UK	Canada experimental
267.5	5267.5		Canada experimental
278.5	5278.5	UK, Finland, Norway, Iceland	
288.5	5288.5	UK, Finland, Norway, Iceland	Canada experimental
298.5	5298.5	Finland	
318.5	5318.5		Canada experimental
327.5	5327.5		Canada experimental
330.5	5330.5	USA, Finland, Norway, Iceland, St. Lucia	
346.5	5346.5	USA, Finland, Norway, Iceland, St. Lucia	
355.0	5355.0	Australia	WIA/WICEN emergency
366.5	5366.5	USA, Finland, Norway, Iceland	
371.5	5371.5	USA, Finland, Norway, Iceland, St. Lucia	
398.5	5398.5	UK, Finland, Norway, Iceland	Canada experimental
403.5	5403.5	USA, UK, Norway, Iceland, St. Lucia	Canada experimental

† Frequency assumes USB emission on all channels.

Notes on the 5MHz List (International)

Frequency: Above listed frequencies are “dial frequencies” as you see them on your radio. The center-of-channel offset is already figured out for you. (The center-of-channel is usually 1.5kHz higher than dial frequency).

Worldwide: The current worldwide standard for Amateur Radio on 5MHz is Upper Sideband (USB). Other emission types are also in use.

USA: Only USB voice with 2.8kHz bandwidth is authorized in USA for all General class or higher licensees, using the equivalent of 50 Watts into a dipole.

UK: Voice, Digital, and CW modes within a 3kHz bandwidth at 200 Watts are authorised in UK for holders of experimental or N.O.V., and channels are often described by the centre-of-channel frequency (dial+1500Hz) or the formal “Foxtrot” designators FA-FB-FC-FE-FM.

Germany: DRA5 Experimental Beacon, operated by DARC (DK0WCY beacon team), transmits propagation data (dial+1500Hz) CW/RTTY/PSK31.

Canada: Experimental licensed operation by Marconi Radio Club (VO1MRC) members. CW or USB on 5260, 5269, 5280, 5290, 5319, 5400 and 5405 kHz with 100 watts output. Some beacon testing on 5269.5 kHz and CW QSOs on 5260 kHz.

Finland: Club stations may apply for authorization to operate the 5MHz channels with maximum power of 50 Watts on USB only. The USB dial frequencies for Finland are: 5288.6, 5298.6, 5330.6, 5346.6, 5366.6, 5371.6, 5398.6 kHz.

Australia: Wireless Institute of Australia is licenced for 2 HF land mobile 5MHz channels, for emergency use by the Wireless Institute Civil Emergency Network, using non-amateur call signs AXF404 and AXF405, and ACMA type approved radio equipment (such as the transceivers normally used for HF outback communications in the VKS737 HF net).

Remote bases and Echolink HF stations: Some HF remote base stations in USA have been in operation on 5371.5kHz, using Internet Remote Base or Echolink with voice squelch and/or UHF remotes.

Evening/Night Guidelines: 5MHz channels are a shared resource with many users. In many countries, amateurs are secondary users and must QRT when a primary station is on the channel. For this reason, transmission time should be kept to a minimum, and it is best to wait a few seconds before responding during a QSO. Considerate hams usually try to avoid longwinded ragchews during peak evening hours whenever activity is high and propagation is open for wide regional communications on the 5MHz channels.

Iceland: 8 channels with 3kHz bandwidth, USB or CW at 100W.

Bangladesh: 5250 to 5310 kHz Amateur Applications; Amateur propagation experiments with stations of administrations permitting such activities. Secondary status.

St. Lucia (J6) has the same 5 channels as USA and there continues to be activity.

Other countries: Some other authorised 5MHz operations have been reported such as the 5Z4HW DXpedition in Kenya. Some experimental operation has also been reported from Russia. Other reports of operation include Columbia and Mexico.

Useful Operating Techniques for the 5MHz Channels

1. Put the 5MHz channels in your transceiver memory, including the USB mode. If possible, also include narrow TX bandwidth, and the correct transmit power level.
2. Before transmitting, check your transceiver's calibration against a time/frequency reference signal such as WWV on 5000.000 kHz. Select a channel, check your power setting, lock your VFO dial, and lock your microphone "channel Up/Down" switch and keypad.
3. Use your RIT or receive clarifier to tune other stations in. Do not change your main VFO dial or transmit frequency unless you discover that you are out of calibration.
4. Avoid long auto-tuning or manual-tuning times if possible. Transmission of a carrier, especially zero-beat, is not allowed in some countries (such as USA).

5. Before starting to transmit, listen on the channel for at least 3 minutes. If it is vacant, start by just saying your callsign. Similar to VHF repeater operation, it is not necessary to call a long CQ. Just announcing your callsign (phonetically) and your location is sometimes enough to start up a contact.
6. If you have a very high receive noise level at your QTH, be very cautious about transmitting because you may be interfering with primary users or a QSO that is already in progress between amateurs.
7. Try to peacefully co-exist and share the channel with other stations talking in the background. Unlike other HF SSB ham bands, 5MHz is channelised and very limited. Don't insist upon a totally clear channel, because it is possible for there to be several layers of QSOs going on simultaneously in different areas on the same channel.
8. ID more often than you normally would. Once you establish contact, say your callsign and the callsign of station you are talking to. This will help a lot when there are multiple stations simultaneously using the same channel.
9. Avoid ragchewing. Use short transmissions, drag your feet between overs, and give everyone a chance to use the channels. Be open to other stations calling each other between gaps in your QSO.
10. There are many 5MHz channels around the world now, and the list is growing. Among regular 5MHz operators, the channels are often called by the last few digits in kilohertz, such as "403.5" (meaning the dial frequency 5403.5kHz).

FCC 5MHz Rules

§97.303 (s) An amateur station having an operator holding a General, Advanced or Amateur Extra Class license may only transmit single sideband, suppressed carrier, (emission type 2K8J3E) upper sideband on the channels 5332 kHz, 5348 kHz, 5368 kHz, 5373 kHz, and 5405 kHz. Amateur operators shall ensure that their transmission occupies only the 2.8 kHz centered around each of these frequencies. Transmissions shall not exceed an effective radiated power (e.r.p) of 50 W PEP. For the purpose of computing e.r.p. the transmitter PEP will be multiplied with the antenna gain relative to a dipole or the equivalent calculation in decibels. A half wave dipole antenna will be presumed to have a gain of 0 dBd. Licensees using other antennas must maintain in their station records either manufacturer data on the antenna gain or calculations of the antenna gain. No amateur station shall cause harmful interference to stations authorized in the mobile and fixed services; nor is any amateur station protected from interference due to the operation of any such station.

5MHz Interference from BPL and Home Plug Transmitters

Some Broadband Over Power Line (BPL) and in-building powerline communications systems (PLCs) use HF and low VHF spectrum for transmitting signals which radiate in the general area of the power lines. Some of these systems have voluntarily conformed to the HomePlug standard which uses "spectrum notches" in most of the HF ham bands in their effort to mitigate some of the interference they cause to hams. However, the existing HomePlug standard does not provide spectrum notches for the 5MHz channels. The USA FCC requires that any new BPL systems have the capability to notch out frequencies whenever they generate interference to licensed services. However, in practice, it is has been difficult to get BPL system operators to deal with interference complaints.

ROCHESTER DX ASSOCIATION

W2RDX

rdxa.com

This Bulletin is the official organ of the Rochester DX Association and is published monthly, September through June. Email your articles, tidbits, ham ads, etc. to Mike, N1OKL at the addresses below by the first Tuesday of the month for inclusion in that month's issue.

All those with an interest in amateur radio and DXing and contesting are cordially invited to any meeting and to join RDXA. Meetings are held at 19:30 local time on the 3rd Tuesday of each month, September through June.

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