

HF Contesting – why not give it a go, (Aug 2006)

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Whether you are new to HF or are very experienced on the low bands there are plenty of reasons to give contesting a go. You don't need a big powerful station or to stay awake all night to enjoy the challenge of operating in a contest. You may not run up a big score, but that does not matter. Contest operating is fun, exciting, challenging and rewarding.

Some hams grizzle when there is a big contest on, but when you listen to a dead band mid week, it is hard to justify our continued access to the frequencies. At least contests allow our governing bodies to demonstrate that we are using our international allocations. "Use it, or lose it!", so rather than grizzle, another old motto is "If you can't beat them, join them".

This article aims to explain some of the benefits and basic rules for contest operation on the HF bands. All of my contesting experience is with SSB and digital modes so my apologies if what I say does not fully relate to CW contesting.

You don't need a fancy contest station with huge Yagi antennas and a lot of power to have a great time. I operate a very modest station running 100W, working into a "low gain" wire loop antenna at only 3m above ground <now a modest 3el mini Yagi>. Some contesters operate QRP power for an additional challenge, so it can be done without expensive gear or high power.

For me the joy of contesting is "the thrill of the chase", moving along the band and breaking the pile-ups with my weak ZL signal. It can be busy, stressful, frustrating and exhilarating all at the same time, but when you are on a roll, the time just seems to fly by. There is also the attraction of working rare DX and pushing up your QSL count towards DXCC.

When I use the term "contest station" in this article, I mean the station sitting on the frequency calling "CQ Contest", as opposed to other contesters who may be calling him / her.

Advantages of contest operation.

1. Bands that seem dead most nights are suddenly alive with DX stations and in most contests they all want to work your station.
2. Many DXpeditions and hams operating from IOTA islands plan their trips to include contests. You might have trouble breaking an endless pile up of Japanese, European or American stations when these stations are operating in 'DXpedition' mode, but during the contest they will want to work your callsign.
3. There is an opportunity to work many countries in a short period of time. When the sunspot cycle is near the top of the cycle it is possible to work 100 countries or more in 24 hours. At the moment with the cycle nearing the bottom of the cycle the options are much more limited and best contest operation will occur around the grey line period (dusk & dawn). Be prepared to move to other bands as the propagation changes.
4. Some contests have sections that you can enter, for instance you can operate, low power (usually 100W or less), QRP (usually 10W or less), single band, single operator with two radios, multi operator teams and many other options. Using an unusual combination of options can lead to some surprising results. For instance I once got a certificate for 1st in New Zealand and 4th in Oceania simply because I was the only ZL operating in the 20m single band category.
5. Contests are a good way to learn how to operate well and to learn how to use the features of your transceiver to make successful contacts in difficult conditions, which are a real test of receiver selectivity. You can learn how to use DSP, noise reduction and

filter settings to drag weak signals out of the noise or filter out strong signals close to the frequency you want to hear.

Myths and mysteries of contest operation.

1. *"I don't want to stay up all night"*. You don't have to! Just work an hour or 10 minutes, there is no rule that says you must work the whole contest.
2. *"I don't have a good antenna or a linear amp"*. Not a problem, some contesters operate QRP and many overseas hams are operating with simple antennas hung out of their apartment windows. Admittedly a good antenna and max legal power can make things easier. Perhaps you could operate the local branch station or form a group and operate as a multi-operator station from another ham's shack.
3. *"Contest operators are rude and aggressive, especially the big contest stations"*. Not true, most contest operators are very skilled and very patient. It's a matter of learning how to play the game. Contest operators want to keep up their "run rate", they don't want your name, they don't want to chat, they don't care about your QTH, the weather, or your ham gear, just give them the contest exchange and move on.
4. *"The 59 signal report is wrong and pointless"*. I don't think that this is a big deal. All contests require an exchange of information. This includes your callsign and most often a signal report and serial number, usually starting at 001. Sometimes other information such as your CQ zone, transmit power or NZART branch is required. If the exchange includes a signal report, it is a convention that this always 59, (or 599 for digital modes & CW), no matter what the actual receive signal is like. There are several reasons for this. Firstly contest operation causes huge congestion as stations compete for the limited band space. Sometimes two stations will be operating on exactly the same frequency, which can lead to a great deal of confusion. This is usually not an intentional attempt to drive another station off the frequency. Due to the directional nature of their antennas and HF propagation, the two stations may be completely unaware of each other, or may be content to share the frequency. The QRM from many stations operating on frequencies very close together means that it can be very difficult to copy the contest exchange, even if the signal is relatively strong. The 59 phrase alerts the operator to listen for the three digit serial number. Another reason to stick to the 59 is that the log programs default to 59 and it takes time to write another number in. Most importantly the contest operator does not want to spend five minutes trying to copy five numbers in difficult conditions when he / she only needs the three digit serial number. In many rigs the S meter readings vary from band to band and there is no standard for an S9 meter reading across different manufacturers. So in fact S9 is pretty meaningless in any case. My recommendation is to go with convention and use 59 the same as every one else. Trying to give 'real' signal reports will just lead to confusion.
5. *"I can't break the pile-ups"*. Breaking the pile-up and getting heard by the other station is mostly a matter of technique and perseverance, but sometimes you just can't be heard, so move on to the next station and try again later. The big contest stations, usually the ones with 1 letter suffixes like D4B or CN2R are generally the easiest to work, they are running BIG antenna systems and LOTS of power. Other loud stations particularly in South America or Europe (Russia / Ukraine) are often running heaps of power but don't have very good antennas. These ones are often difficult or impossible to work because although they are loud they can't hear much through the QRM. Some stations run CQ voice keyers and listen in the breaks between the words, they never shut up and listen and their receivers are desensitised by their own transmit signal, so they are often the hardest to work of all.
6. *"Darn contesters fill up all the bands so I can't have a rag chew"*. Yes that does happen, but contesters do have the right to operate as well. It really annoys me when I hear local hams sitting on top of a weak DX or contest station. You might have worked the DX station already or you may want the frequency for a net or whatever, but if the frequency is in use, it is in use – end of story. Contests do not usually use all of the phone section

of the bands there should be a region reserved at the low end available for your net or rag chewing. Also the major contests are spaced so there are non-contest weekends between them. Contests do get the usage on the bands up, which demonstrates to government bodies that there are people using the spectrum. Also there are not normally any contests on the WARC bands. Rather than moaning, why not hand out a few numbers and get involved.

7. *"I called CQ but didn't get any takers"*, There is no doubt that the best way to get a high score is to sit on a frequency and call "CQ Contest". If you can get a pileup happening this can give you an incredible run rate and leave you breathless. It can get very, very busy and is a real test of your organisational and sometimes diplomacy skills. A pileup of stations calling you will attract other stations as they tune across the band. They hear the stations calling you before they hear your station. You may also get spotted on a DX cluster, which will add to the number of stations calling you. Note that it is illegal to spot your own callsign on a cluster (or have a mate do it) during a contest. The problem is that until you do get a pileup calling you, your station is a small signal in a sea of large signals from big high power multi-op "big guns". The other problem is finding a clear frequency. My advice is try calling for 10 minutes or so, long enough for another station to spot you on a cluster and if you don't have any success, move on to another frequency or go back to the hunt and peck technique. If you are not getting calls in 10 minutes, you are either not being heard overseas due to lack of grunt, or there is a stronger signal on or near your frequency that you can't hear but they can.

Hints and tips for happy contesting

1. To break a pile-up, try calling a few seconds after everyone else. The DX station will answer the call he hears in the clear after all the others squash each other.
2. Keep trying, but don't be a pest. Listen for "QRZ" or "CQ Contest" and then make your call, if calling late isn't working, call as soon as you can. Don't squash the previous station, he may need a confirmation of the callsign or exchange. **Wait for the contest station to call CQ or QRZ before making your call.**
3. **Call once – then listen!** I don't believe saying your callsign twice is very helpful as you are likely to miss hearing the contest station acknowledge you, which causes heaps of confusion and delays. This is true for digital modes and probably cw as well, look at what other stations are doing, but use a maximum of 2x your callsign.
4. If there is a stronger local station calling and you think he may be swamping you out, wait until he has worked the Contest station and moved on. If you both keep calling, the Contest station may not be able to catch either callsign.
5. Make your call after the Contest station has worked a VK or another ZL **<in your case another local station>**. Chances are they will have swung their beam towards New Zealand **<your area>**, which will improve your chances as he will be expecting to hear your prefix at that heading which makes picking your weak signal out of the noise a bit easier. It also makes the other station aware that the band is open to your part of the world.
6. Try calling a few Hz off frequency so you sound sharper than the others. This works for digital modes as well. The DX contest station may see you on the waterfall just off to the side of all the other stations calling.
7. If you call 10 times and they still can't hear you, call it quits and move on. If you continue calling, you are just making life difficult for other stations trying to work the station. Maybe the band will improve and you can have another go in half an hour, or the propagation to the stations causing the pileup may change, improving your chances of a successful contact.

8. If a station is “working up”, or ‘split’, across a range of frequencies, listen to where the last successful station was and then call on or near the same frequency. Some ops move slowly up or down the band. By listening, you may be able to work out where to position your transmit frequency.
9. Finding a clear frequency to call “CQ Contest” on can be very difficult. Even after you find one and call CQ a few times you sometimes hear another station come out of the noise. As always, listen before you call. The best way to get a frequency is to be ready to start the moment the contest starts. Don’t try to get a major DX frequency like 14.200 you won’t stand a chance. It is better to try a frequency at either the low end or high end of the frequencies in use by the contest. But don’t upset people by operating in areas usually used for other modes. I like to be the third or fourth station in from the edge. In other words I like to have a few stations operating on frequencies below mine. Generally I don’t call CQ in big contests like CQWW World Prefix, because I won’t be able to get a clear channel and would be unlikely to be heard. In local contests such as the VK/ZL Tans Tasman or the Oceania contest it is much easier to get a spot and call CQ.

Basic rules that really should be observed.

1. Check the contest rules – they are just about always available on the Internet
2. Operate in the portion of the band allocated for the mode in use. For example stay out of the CW part of the band when operating SSB. Generally the lower part of the band is reserved for CW & digital, then there is an area for non-contest SSB stations, then the SSB contest stations. Yes I know that contest stations do tend to spread out more than that, but at least **you** can operate within the accepted band plan.
3. Operate within the rules of your licence and the contest. If you don’t you are only fooling yourself. The rules for local Oceania and VK/ZL contests are at <http://vk4dx.net/home/vk-contest-calendar> (a really excellent web site). For international contests check out CQ or ARRL or <http://www.sk3bg.se/contest> or <http://www.hb9dhg.ch>
4. **Please always, always, always** submit your log, even if it only has 1 QSO. It is important for the contest organiser to know what stations were active and your log can act as a checklog for other stations.
5. Don’t tread on other stations. Wait until the contest station has finished with the last guy and called QRZ or CQ before making your call.
6. If the Contest station says “something DW” or “just the ZL3”, hold back and let me take the call, don’t pipe in with “ZL2xxx”. That is really annoying and will make you VERY unpopular. Contest stations often say “again” which is not really very helpful, because often you don’t know if it is your station he or she is referring to. If they say “again” and it might be you, make your call again.
7. Use a contest log program. You can download them as shareware or freeware from the Internet. They are usually small, so you can use “dial-up” but if you haven’t got access to Broadband Internet get a friend to download it or contact me and I’ll send you a CD <[ha 2006 - times change](http://ha2006-timeschange.com)>. Check out the software links at <http://vk4dx.net/home/software> . I use the excellent AA Log Contest Module available free from <http://www.dxsoft.com/dlsoft.htm> . Your log software must have the ability to save in Cabrillo format so you can submit your log to the contest organiser and if it can also save in ADIF format you should be able to import the contest QSOs into your main station log program.
8. Listen before you call CQ, then listen some more. There is a good chance the frequency is in use.

9. It is common for contest stations on 40m to work split. Make sure you are set for split operation and do not transmit on the other station's transmit frequency unless they specifically say they are listening on both frequencies. You are very likely to get a rude reminder from other stations if you do.
10. Use **standard alpha codes**; ie "Zulu Lima Three Delta Whisky", rather than joke alpha codes which are difficult to pick up in high noise conditions. If you try three times and the Contest station still can't get your call, try one of the well known alternatives like "Zulu Lima Three Denmark Washington" or just the callsign "ZL3DW". Repeat the whole call three times and do not mix up different alpha code types in the same over. Do not repeat single letters unless you are asked to. For example the station may just ask for the last letter, "Whisky, Whisky, Whisky" or your prefix, "Zulu Lima".

Be consistent, do not use one type of alpha code on the first call and a completely different alpha code on the second – that is just too confusing for a station that has most of your call but is confused about one or two letters.

Never, ever, ever, ever duplicate the codes like "Zulu Zulu Lima Lima Three Three". That is 100% guaranteed to fail, but I have heard it done.
11. Always use your **whole callsign** when calling a DX contest station. Yes I know a lotta folks just use part of their call then fill in the rest when they have made it through the pile up, but I think it is poor operating practice and adds to the confusion.
12. Log QSO times must be UTC, not local time.

Getting and sending QSL cards to and from contest stations.

Rule No 1 – don't ask for a QSL card during the contest. After the contest, send a QSL card or a request and you are likely to get a QSL card back.

Rule No 2 – don't ask about QSL routes or managers during the contest. Some DXpedition stations will include this info in their CQ Contest call. After the contest look up the callsign on www.QRZ.com or www.hamcall.net/call

Rule No 3 – big contest stations almost always have a special contest callsign. If you want a QSL card you MUST send your card to their QSL manager or their home callsign. The information you need is usually on the web sites I mentioned above.

Contest stations do not normally send out QSL cards unless you request one. They may work thousands of stations during every contest, so the cost would be prohibitive. However most contest stations will send you a card if you send them one. If you don't have a QSL card just send the QSO details in a short note and request a QSL card. The rules for sending QSL cards are the same as for any DX station. If they are rare or a big contest station you will probably need to send a card direct to the QSL manager or a home callsign. Include your card or request, a self addressed envelope big enough for a QSL card and an IRC or a couple of "Green Stamps". Less rare stations will often reply to a card sent via the bureau.

<New Zealand hams> If you want to receive QSL card from the ZL bureau send your local QSL manger some self addressed and stamped envelopes, big enough to hold 10 – 20 cards. The details are in the Callbook. A \$10 donation towards bureau costs every now and again is also appreciated.

A lot of contest stations put their logs on the ARRL Logbook of the World, which will automatically credit you with a confirmed contact towards DXCC or WAS, <or CQ WPX>. It is worth joining LoTW if you are serious about gaining these awards. A few contest stations, particularly those active in digital mode contests, put their logs on EQSL which has its own set of awards.

Where to start – good contests for beginners.

The best contests for beginners are the local ones. The VK/ZL Trans Tasman contest on 80m is great fun and a lot less formal than the big DX contests. You can work the same station once every hour on each band so after a few hours the station ops become like old friends. The NZART Memorial Contest, Field Day contest, and the VK Remembrance Day contest are all fun rather than serious contests and good for getting the feel of things.

[<non ZL, check out your countries contests, sweepstakes etc.>](#)

The best local contest for DX contacts is the Oceania Contest. It allows operation on all bands from 160m – 10m (except WARC bands). This contest has the huge advantage that everyone in the world is trying to work ZL, VK, and the Pacific Islands. It is the **only** DX contest where **everyone** wants to work you!

But don't be timid, have a go at the CQWW World Prefix or DX contest or the ARRL DX contest. There are also world wide contests for CW, RTTY and PSK. You don't have to operate all night just an hour or so, to get a taste of it. (But please submit your log even if it only has one or two contacts on it).

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