

Contesting Thoughts by KA1C

WHAT IS CONTESTING?

Contesting is trying to make as many contacts as quickly as possible in a given time. Each contact is called a QSO, or Q for short, even though it is not really a QSO. You are trying to make as many Q's per hour as possible. This is called your Q rate, or rate.

Contesting is a competition against other hams in your club, state, region, zone, country, or the world. Some only compete against themselves, setting last years score as a goal to meet, beat, or come close to. Some say contesting is a sport: Radio Sport. Others describe it as the ultimate multi-player computer game!

Your goal is to try to get a score as high as possible by finding and contacting certain other stations. Each station has a certain point value; usually depending on where they are located or on what band you contact them on. It is harder to work DX on the lower bands like 160 & 80 meters, so they are usually worth more in points. Next you have multipliers, or mults. These are stations that multiply the points you have collected to produce your final score. Multipliers can be different grid squares, countries, zones, peoples ages, the year you were first licensed, Island stations, how much power you are running, call prefixes, U.S. call areas, etc.

Ultimately, you are trying to reach the highest score you possible can by contacting more of the higher point value stations on the higher point value bands, contacting as many "mult" stations as possible, and strategizing what you can do to accomplish this by your choice of operating times and bands.

Some Reasons for Contesting

First, it's fun! It is hard to describe the thrill of beating out a KW station in a pile-up while running only 100 watts, or beating a low power station while operating Qrp (5w). Second, you get to test your equipment and your operating skills for operating efficiency and endurance, as well as your operating tactics and strategy. Learning how to "get through" under contest conditions will only make you a better operator, especially if you like to work DX. You will only be competing against other hams in similar situations, such as location, output power, and number of operators. There are awards that can be earned that range from participation status to certificate winner for your entry class and location, all the way to prestigious looking wall plaques. It is also nice to see your call published with other entrants scores, and to see how you move up the listing each year!

You will also be making contacts that qualify for awards like DXCC (100 countries), WAZ (worked all zones), WAS (worked all States), etc. Besides, if there is a contest on, the bands will be pretty crowded in that section of the band (CW, RTTY, SSB, etc.), and as they say, if you can't beat them, join them! It is something to do, and you will be passing out points from your state, grid, country, prefix, zone, etc. If you're from a highly desired area, YOU will be the one everyone wants, such as the New England QSO Party. (Maine can be rare.)

Most contest entrants have no expectations of winning, and just playing in the "test" can be fun. Contesting, however, is not for everyone! It can be difficult to find the time, propagation doesn't always co-operate, and Murphy just loves to visit when you least expect it!

How Much Time Do You Spend in a contest?

Some people go hog wild, straight out for the entire contest. Some only work segments, such as the 1st three hours, or only the last day when things calm down. You decide when & how to operate, based on your circumstances and desires. You don't even have to send in your score if you don't want to! Some only work one or a few bands while others work all bands. Which bands do you have the best antennas for? When do you want to eat? Do you have company? Do you need to go shopping? Phone calls? Bathroom breaks? It's entirely up to you.

I like to start at the beginning of a contest due to the adrenaline rush it gives me! The thrill of the HUNT! A Weekend Warrior! I operate as long as it is fun and I am making Q's. When I, or the band, dry up, I go take a break. A walk is good, as is spending time with family. It changes you. It charges me! If I were only making a few Q's, I'd rather take a break and come back refreshed! They will still be there when you get back!

When To Contest

Sometimes you cannot always operate when you want to, especially if you have TVI and unhappy neighbors. Maybe you would prefer at night when the chance of phone calls and visits are less. Some prefer summer or winter contests if they have other hobbies or interests such as fishing, ATViing, and/or snowmobiling. The best time to contest is when you are making reasonable Q's and wide-awake. If this is not happening, take a walk, go eat, sleep, or exercise! If you're falling asleep, go to BED!

How Long To Contest

Some contests run for 48, 30, 24, 12, or 6 hours. Again, you decide how long you can and want to go. Many operators set a goal of so many hours, 100 Q's, 50 states, or 5 new countries.

Which Contests to Enter

There are "tests" for CW, SSB, mixed, RTTY, PSK, VHF weak signal, SSTV and others. There are contests for the USA, North America, New England, world wide, and DX only. I do mostly SSB, RTTY, and VHF, and there are times I have 5 contests a month. There are times I do two at the same time, such as a RTTY "test" and a VHF "test". It sure is busy, but it sure is FUN!

Contesting Equipment

There are many things to consider when deciding to start contesting. Do you have the right equipment, such as a 100% duty cycle transmitter at full power for RTTY, FM, and AM? Do you have headphones to hear the weak ones and keep outside noise from bothering you? How about a PTT foot switch to keep both hands free for writing and logging? You really should consider a computer for electronic logging. It doesn't have to be anything special, but it should be very reliable. I almost never put my ham computer on-line, except for reporting scores, downloading new "HAM" programs, or as a last resort if the other computer is down (get email?).

Do you have a rotatable antenna? It is not essential, but it does help. I use my 3-element beam for the desired direction, such as Europe, but can quickly switch to my vertical if state side calls me. (Ant 1, ant 2 switch.)

If you enter a voice contest and expect to work a lot of stations it is helpful to have a voice keyer, just as a CW keyer would help. Some logging programs even have a voice keyer built in (.wav files.) Simply press F1 to call CQ, F2 to send the exchange, F3 to send TU (thank you) and QRZ (who is next?), and F4 to send your call. The latter is very helpful when trying to break a pileup.

If you expect to enter any digital "tests", you will need a connection between your computer and your radio. Some available options include: Rig-Blaster, Rascal, or your own homemade interface (the most fun!)

Another option that I feel is very important is an UPS (Uninterruptible Power Supply). This will keep your computer going if the AC power fails so you won't lose your contact log. A good contest-logging program also adds to the fun. I prefer N1MM Logger, and it's free! It does almost every contest there is, figures out your score, keeps track of your rate, shows needed "mults", makes your Cabrillo file to email in to the contest sponsors, and a ton of other things. There are many other programs available, and many are also free. Check them out!

Personal Needs for Contesting

Some personal things to consider include food and liquids. I like distilled water and M&M's. I have a nice hi-back office chair with a massage & heating cushion on it and padded armrests. I have a small pillow for my back available, and I have a fan behind me on the right that blows by me at my radios. I have a small electric heater for my feet. When I take a break, I try to co-ordinate it with needed potty breaks, meals, company visits, etc. Make sure you are comfortable and ergonomic safe such as computer wrist supports and proper height monitors and keyboards. I also keep a cordless phone with caller ID nearby to check for important calls.

Contest Rules

Each contest will have a set of rules for all to play by. It explains who can work whom, start & stop times, bands to operate on, proper required exchanges between stations, etc. If you plan to only "play" in the "test", give the rules a quick read. If you are at all serious, give them a "good" read. If you work a station a second time, it is called a duplicate. Most all contests do not give credit for duplicates, and most will deduct points if you claim QSO credit a second time. A good contest-logging program will alert you to a station being a duplicate, or "dupe" for short. If you try to work a station a second time, you will most likely get the "dupe" message. Don't take offense – none intended! It is **STRONGLY** recommended that if you are calling CQ in the test, and a "dupe" calls you, WORK 'EM! The computer will not claim credit a second time, and you won't waste time arguing with the "dupe" status of the other station! All in all, a needless waste of time!

Chose A Category to Enter

When entering a contest where you plan to send in your score, you need to choose how you will operate. You can enter as a single operator where you do everything. You can enter as assisted where someone, even a non-ham, helps you, maybe by logging on the computer, listening on a second radio looking for "mults", or you receive "DX spotting" assistance. Some other options include two operators and one radio, two operators and two radios, etc.

Other entry choices are power level and band of operation. Be sure to enter the correct category and power! Power levels are usually high, low, and Qrp. That corresponds to maximum legal limit, 100 watts, or 5 watts. Band selection is another consideration. You may enter as all-band or single band. This is a personal choice, and for a better chance of winning a category, check last years scores to see which one had the least number of entrants in your area, and pick that one. If you want to sleep, choose a daytime band. If you want to be left alone, choose a nighttime band. When do you have the most time to operate? Which bands do you have the best antennas for? Remember, there is no contesting on the WARC bands (60M, 30M, 17M, and 12M).

Run vs S&P

There are two ways to operate in a contest. One is called running, and the other is called search & pounce. Running is where you find a clear frequency and set there, call CQ Test, and answer everybody that calls you. Believe it or not, some rare DX will find and call you! They don't want a mob scene or pile-up to manage, but they do like to contest, so they search out desired stations to answer. I have been amazed by the high-value "mults" that have called me in a "test". Kind of like fishing! You just never know who will answer your CQ!

Search & pounce is just what the name implies! Find 'em! Pounce on 'em! Quickly! Pounce! That is the name of the game! Listen to the rhythm of other calling stations and call like they do. Quick! Short! In the clear! They won't hear you if you call when everyone else does and you are running 100 or 5 watts! Timing is everything! So is having your equipment set up properly.

I suggest doing S&P in the first few contests, or until you gain the confidence needed to find a frequency and run! When running, think you are loud, and you will come across that way! Be polite! But don't let anyone chase you off of your chosen frequency! If they are bothering you, you are bothering them, and they are counting on your giving up before they do! Don't do it! Stand tall! There have been times I have continued to

call CQ for over 15 minutes without a reply, due to co-channel interference. This is where the voice keyer comes in handy! Eventually, the weaker or smaller station will move. Will it be you?

When starting out in a contest, most will start with S&P, gathering all they can from a band. Most also start at the bottom edge and work stations by going up the band. If you find yourself stuck behind another station doing the same thing, meaning every time you call someone, they do to, and they win, try starting at the top of the band and work your way down. You will meet them once in the middle, but only once!

BY ALL MEANS, WHEN YOU GET THE COURAGE TO RUN, DO SO!! Remember, we all make mistakes, and no one is expecting you to be perfect, so go for it! It takes a while to get a run going, maybe 10 minutes or so, but it will happen. When your rate falls to 2-3 Q's in ten minutes it's time for a new run frequency or to go back to S&P. Remember, there may be stations on your frequency that you cannot hear and so others cannot hear you.

There are two types of contesters known as the "Big Guns" and the "Little Pistols!" The big guns initially work each other, and then because there are fewer of them, they get lonely and need to work the multitudes of little pistols; you and I! If you try to work a DX station on the first day of a contest, and cannot get through, check back on day two. They will beg for anyone to call them! Remember, we are the "points" that the big guns win with!

Type of Equipment

When you first get into contesting, almost anything will do for radio equipment, but after a while, you will find a need for some newer functions, such as DSP, notch filters, band pass filters, more comfortable headphones, automatic antenna tuners, and such. Older tube type radios will work, but are best for running due to a lack of ability to quickly QSY while in S&P mode. You will also appreciate a UTC clock, a cheat sheet for the logging program you are using, and a summary of the contest rules.

The Spirit of Contesting

I have to admit, there are some pretty crummy operators out there, and they will tell you just what is on their minds. Pay no attention to them, as they are NOT the majority. I have personally heard sought after DX stations stop their run and take the time to help a newbie that is having trouble. Once a station took over 5 minutes of his run time to do this, while I waited my turn to call. I will admit, it was on RTTY, and I think RTTY operators are, by and large, a much more tolerant group, but it did make me very proud to be a ham!

You need to set reasonable goals for your self when first starting off. Remember, you are not going to win! You are here in a hobby, trying to have a good time! When it no longer is fun, turn the frequency dial or the power switch to another position! Are most contest operators good spirited? Yes! Are there some that will get upset? Yes! Should you stop and help a newbie if you think you can? Yes! Remember, we were all beginners at one time!

Remember that mistakes, mess-ups, and accidents happen. Move on! You and the other contest operators are trying to make as many Q's as possible, and if some people seem in a hurry, they are! Time is Q's! You won't get everyone you call. If you're nervous, and who isn't, get the exchange info before you call, if possible. If I am trying to work someone who is giving out serial numbers as the exchange, I keep trying until I know I have copied a number correctly. Then, as they work another station, I just increase my number until I work 'em, and then I KNOW I have the exchange right! Where do I think you will have the best time? Why RTTY, of course! And don't forget to send in your log – you never know!

How to Contest

Luckily, most voice contests are in English, but there are still things you could and should do to ensure a happy hobby contest. First, listen for a rhythm. There is one there! The Running station sets this rhythm, and if you

are not reasonably in sync with it, you will NOT work them! Second, time your calls so you don't become part of the pile-up! Some people will tell you to say your call to yourself, the time it takes for others to call the DX, and then give your call BRIEFLY, and with proper phonetics. For the most part, this is good advice. I, however, prefer to listen, listen, listen! Listen to the style of operators that ARE getting through! I also like to wait for the running station to say QRZ, and then I count time until they return to someone. If they needed 10 seconds to come back to someone, then I know they didn't hear clearly until about eight or nine seconds into the fray. So when does KA1C call? About eight or nine seconds after the QRZ! Rocket science, isn't it? Why do some people not understand this? They call and call, using cutesy phonetics, and cannot understand why they can't get through!

When you really need a station and you are not showing much probability, move on. I generally will call 4 to 10 times and then the station goes into memory or the logging program band list. I then come back later when the "big guns" and "bullies" have either gotten through, or gotten tired and left. I do not have to fight them! If I still cannot get through, it is time to check my SWR, signal quality, etc. If they are not coming back to me, maybe there is a reason!!

On receive, a good trick to use is to turn down the RF gain control, and turn up the audio gain control. Now, ride the RF gain as your volume. You will be surprised how much easier it is to copy a signal! Know how to use your radio's filters, both bandpass and notch, as well as the noise blanker and DSP controls. Good quality headphones, like those from Heil, really make it much easier to stay in the chair for 10 to 12 hours at a time. If you are not using headphones, you ARE using your brain as a filter. It has to separate the desired radio sounds from the undesired ones around you!

Be careful to stay in band, as some countries can operate different frequencies than the USA. No need to attract the attention of an Official Observer or the FCC! It is OK to make and use cheat sheets. I still use them! On phone, speak clearly and use common ITU phonetics. Each contest contact is expected to be VERY BRIEF! Don't drag it out with unnecessary vocalizations. Speak the required exchange once! If a repeat is necessary, give only the part they missed, not the whole exchange! If they need a repeat on your name, don't give your name and state, only your name! When trying to contact a running station, only give your call once or maybe twice! They know theirs! Short, sharp (speech processor on?), and quick! You will get a reply! If you really want to sharpen your operating skills, try Qrp contesting with only 5 watts! After you have been able to make 10 to 12 contacts this way, go back to 100 watts and watch the magic! You did learn something!

Before a Contest

Read the rules. Set up & test your logging program. Decide on the type of food and liquids you will need. Be VERY careful of spillage foods like soup, coffee, soda, ketchup, etc. Getting these into the keyboard will likely ruin your entire weekend! Solid foods that can be eaten with a fork work best for me. Usually I leave the radio to eat, as I will probably need the bathroom, too!

Setup and test all radios, rotors, antenna switches, and voice & CW keyers that you expect to use. Now is the time to record the messages in the keyers, especially the voice ones. You want to do it when you are sharp and excited so it comes across that way, not half way through the "test" when you are dead beat! Ever notice how the high-pitched voices of YL's, XYL's, and the kids get through? Ever think of having them record your voice messages for you? Couldn't hurt!

Be sure to set your computer clock to the correct time, practice entering dummy calls into the logging program, edit those calls, delete them, and check that everything works. Now, go put some sleep into the sleep bank!

Contest Scoring

Each Q is worth 1 or more points. Different things, such as countries, continents, CQ zones, grid squares, etc, multiply these points. The highest score in each location & category wins (state, region, zone, etc.)

It is not uncommon for big guns to make several thousand Q's in a single 48-hour contest. Work the dupes! If you miscopy a call or part of the exchange, you will receive no point credit, and you are usually charged an additional three contacts as a penalty! Copy carefully! Your claimed score is usually sent in to the contest sponsors via an email attachment. You usually put your call in the header, and sometimes your operating class. Check the rules!

Side Note on RTTY Contesting

RTTY is a digital mode that has been around since the 1950's or so. It originated from old retired Western Union Teletype motor driven machines that were donated to or bought by hams. They were connected to terminal units that decoded and encoded audio tones that could be sent via the mic jack and the speaker. Now days, RTTY is usually done with a computer sound card. This would be known as AFSK, or Audio Frequency Shift Keying. Shifting the CW frequency can also send RTTY. The resulting CW frequency shift sounds like audio tones at the receiving end. This is known as FSK, or Frequency Shift Keying. Either works well.

Most RTTY takes place on the following frequencies:

80M: 3570 – 3600	20M: 14070 – 14120
40M: 7030 – 7070	15M: 21070 – 21100

Why RTTY??

There are many appealing reasons to operate RTTY, just like any other digital mode. I personally believe RTTY contesting is the most popular of the digital modes. It is copied by the computer, which separates the desired signal from the QRM & QRN. The computer immediately tells you if the other station is needed at all, are a dupe, or a badly needed mult! RTTY operators seem to be more tolerant of beginners and mistakes. Your hearing also benefits, as you don't need to "hear" the other station to have a contact. Just watch the computer screen! (Now your vision suffers! Hi hi.) In most every RTTY contest, everyone works everyone else. The pileups seem to be more controlled and calmer, and keyboard macros will send anything you program into them. This is why some people can operate two radios at the same time. The computer is a great help as it does most of the work!

After The Contest...

Send in your log! You just never know. Maybe no one else in your category did, and you won! When the results are published, check how you did. Vow to at least match it next year. If a UBN file is available, review it for things you could do better. (A UBN file tells you about mistakes you made coping other station's calls, exchanges, people you thought you worked but didn't really, etc.)

Do you plan to send QSL cards out? You may be surprised how many you get! I usually send cards to the ones that send to me first, as they most always include a SASE. That makes it zero cost to me, stateside. The ARRL QSL buro offers almost free outgoing & incoming QSL card service. Check it out! Don't be too surprised if the contest results take nine months to a year to be published. It takes a lot of work to cross check many thousand logs, each with many hundreds Q's in them!

Remember, this is a hobby! It is supposed to be fun! Enjoy!

See you on the bands!

KA1C
Steve Roderick

Here are some of my favorite contests, by month.

JAN	ARRL RTTY ROUND-UP	JUL	IARU CHAMPIONSHIP SSB
JAN	ARRL VHF (6M/2M) SSB	JUL	IOTA CONTEST SSB
JAN	UK DX RTTY	AUG	TARA RTTY GRID DIP
JAN	BARTG RTTY SPRINT	AUG	SARTG RTTY
FEB	CQ WW RTTY WPX	AUG	SCC RTTY
FEB	NAQP RTTY	SEP	RUSSIAN WW RTTY
FEB	CQ WW 160M DX SSB	SEP	ARRL VHF SSB
MAR	ARRL INTL DX SSB (QRP)	SEP	CQ WW RTTY DX
MAR	BARTG SPRING RTTY	OCT	JARTS RTTY
MAR	CQ WW WPX SSB	OCT	CQ WW DX SSB
APR	EA RTTY	NOV	WAE DX RTTY
APR	SP DX RTTY	NOV	ARRL SWEEPSTAKES SSB (SS)
MAY	VOLTA RTTY	DEC	TARA RTTY MELEE
JUN	ANARTS WW RTTY	DEC	ARRL 10M SSB
JUN	ARRL FIELD DAY	DEC	OK DX RTTY
JUL	DL-DX RTTY		