

# Glossary 2018 – by Patrick Barkey, N9RV

## 10-minute rule

The 10 minute rule restricts band changes for some multi-operator categories for certain contests. The implementation of the rule depends on the contest -- in some cases it has been replaced by a band change rule. The rule was designed to prevent the interleaving of QSO's on different bands for "single" transmitter categories by stations which actually have multiple transmitters on different bands.

**Categories:** contest specific concept, operating classification,

**See Also:** Band change rule, MS, M2, rubber clocking

## 175 mile radius

A geographic requirement for groups of stations jointly submitting their scores as part of the club competition in ARRL contests. In the "unlimited" category of club competition, stations submitting their scores as part of a club for the club competition must either be within a single ARRL section, or within a 175 mile radius of a centroid, to be eligible to contribute their score to the club total..

**Categories:** contest specific concept, log checking and reporting

**See Also:**

## 3830

The frequency on the 75 meter band where stations congregate at the end of a contest to exchange scores informally. In actual practice, most of this now takes place on internet. The listserv, or reflector, where much of this takes place is called the 3830 reflector. It is hosted by contesting.com. A separate site, 3830scores.com, has comprehensive summaries of (unverified) contest scores reported by participants.

**Categories:** log checking and reporting

**See Also:**

## 4-square

An increasingly common array of four vertical antennas arranged in a square that is electronically steered in four, switchable directions using toroidal or coaxial delay lines. Once used mostly as transmit antennas, particularly on lower frequencies where yagis are not practicable, these arrays are also becoming common as receive antennas. 4-square controllers, which perform the switching, are both homebrew and commercially available.

**Categories:** station hardware

**See Also:** Receive antennas

## ADIF

Amateur Data Interchange Format. A transport format for contest logs used for importing/exporting files between different logging software and other programs. Similar in function to Cabrillo.

**Categories:** operating software/hardware

**See Also:**

## AFSK

Audio Frequency Shift Keying is a RTTY mode where two audio tones are fed into the Mic or auxiliary audio input to the SSB transmitter to create the two RTTY RF frequencies.

**Categories:** general

**See Also:**

## Assisted

Assisted is an "overlay" category that is interpreted in most contests as meaning that use of spotting information delivered from internet or packet radio based networks which give real-time information on frequencies and callsigns of stations in the contest is allowed. It is a single operator overlay -- most multi-operator categories already allow spotting assistance.

**Categories:** operating classification

**See Also:** SOA, unassisted

## Band change rule

A rule which restricts band changes for certain multi-operator categories in some contests. A band change rule says that a station can, say, only make 8 band changes per hour. Note that moving to a band to work something, and then returning counts as two band changes.

**Categories:** contest specific concept

**See Also:** 10-minute rule, MS, M2

## Band Decoder

A band decoder either operates through hardware or software to switch station hardware (e.g., antennas, filters) based upon the band selection of the radio. They are a fundamental part of most top tier stations.

**Categories:** station hardware

**See Also:**

## Band Edge

The band edge generally refers to the lowest (or highest) frequency in the band where one can legally operate within the limits of his/her license. For US operators, for example, this would be approximately 21200.4, say, for 15 (USB), but would be about 7127 or so for 40 (LSB). The reverse is true for the upper band edge – e.g., on USB on 15 meters the practical limit for transmit frequency is approximately 21448. The lower band edge is sometimes desirable for US operators who are running since QRM from other W stations can only be on one side of your signal.

**Categories:** operating technique, ethics,

**See Also:**

## Band Map

A graphical, real time display of stations arranged by frequency presented by most popular contest software. The map is either populated by telnet/packet spots from clusters and skimmers, and/or may be filled in using data entered by the user. Most software allows users to then click on stations on the map to be taken directly to the frequency the station is reported to be on. Stations listed on the map are color coded – with new multipliers distinctly noted. (Stations previously worked may not be listed at all). The accuracy of these maps is only as good as the data used to construct it – errors in callsigns are frequently encountered. Use of band maps (or packet/telnet and skimmer spots) are not permitted for Single Operator Unassisted categories.

**Categories:** operating software/hardware

**See Also:**

## Beacon

Fixed, automated transmitters which transmit signals (typically CW) continuously to allow operators to check propagation. These transmitters are located around the globe and on HF are mostly found on bands such as 10 meters above 28.1 MHz. They typically use low power and omni-directional antennas. It can be good operating strategy to tune to these stations during contests to learn when propagation might support QSO's even if activity and thus stations in the contest are not heard

**Categories:** operating techniques

**See Also:** RBN

## **Bip/Bop**

A hardware switching arrangement for stacked yagis or other all driven antenna arrays that allows the operator to select both in phase (BIP) or both out of phase (BOP) operation. The latter can be dramatically better for very high angles of radiation..

**Categories:** station hardware

**See Also:** Stack, Yagi, phasing

## **Blind skimmer**

A mode of operation for a CW skimmer that disables the decoding of callsigns as well as the integration with internet spots. In this blind mode, the operator only sees (potentially) a waterfall display showing recent historical activity across the band as with a panadaptor. Blind mode is legal for single operator, unassisted entrants in most major contests.

**Categories:** contesting hardware/software

**See Also:** skimmer, panadapater, spots, SOAB, SOA

## **Breakdown**

The disaggregation of one's contest score into QSO's and multipliers worked, usually separately tallied for each band (or even additionally, for each hour).

**Categories:** log checking and reporting

**See Also:**

## **Buffers**

To account for latency and jitter, most systems allow for an amount of 'buffering' or 'storing up' packets as they arrive, so that a momentary big swing in either latency or jitter won't interrupt the flow of conversation. Too many buffers introduces extra time and can make transmit / turnaround times grow to be an annoyance in contest situations

**Categories:** remote radio

**See Also:** Latency, Jitter

## **Bust**

A bust is a QSO that is incorrect in some way -- the callsign or exchange was inaccurately recorded. May also refer to spots which are incorrect.

**Categories:** log checking and reporting, ethics,

**See Also:** Spot

## **Cabrillo**

Cabrillo is a very flexible and generalized computer file format that is supported for score reporting by all modern contest software. Most contests have moved to require that electronic log submissions provide contest logs in this format. In most cases contest software will do this automatically.

**Categories:** log checking and reporting

**See Also:**

## **Check**

A two digit number that corresponds to the first year that you obtained your ham radio license. The check is part of the exchange in the ARRL SS contest. Multi-operator stations use the same check regardless of who is

**Categories:** contest specific concept

**See Also:** Exchange

## Check Log

A category for log submissions which removes the entrant from any competition or score listing. Instead, the log information is submitted solely for log checking purposes by the contest sponsor.

**Categories:** operating classification

**See Also:**

## Claimed Score

The contest score that is computed before any deductions for incorrectly logged information (conducted after the contestant submits the log to the contest sponsor) take place.

**Categories:** log checking and reporting

**See Also:**

## CODEC

CODE then DECODE. This is the software that puts audio from an analog form into a digital form, and reverses the process on the other end of a link. It is how we send audio over the internet. Without this, VOIP would not be possible.

**Categories:** remote radio

**See Also:** VO IP

## Cty.dat

Cty.dat, or sometimes wl\_cty.dat, also known as a "country file." is the computer file containing the lookup information that translates prefixes of callsigns into country and/or zone multipliers. Software would use this file, say, to tell you that N9RV counts as a W, and is in CQ zone 4 (or ITU zone 6). Since worldwide prefixes are frequently in a state of flux, an up-to-date country file is always desirable. More recent country files also contain data that may help determine a station's zone. Such information can be inaccurate and in all cases operators should gather such information from the contest exchanges themselves.

**Categories:** operating software/hardware

**See Also:** Mult, Exchange

## Deadline

The latest day that logs can be submitted to the contest sponsor to be included in the competition.

**Categories:** log checking and reporting

**See Also:**

## Digital Voice Keyer

Hardware which digitally records one's voice for CQ's, contest exchanges and other frequently spoken information. The recording is played back using keystrokes defined by software (or by pushing a button for a stand alone box), thus saving the operator the fatigue of doing it manually. Most modern software uses computer sound cards for this purpose. Older software used specially designed cards (e.g., the DVP by K1EA, the W9XT card) or even a stand alone box.

**Categories:** operating software/hardware

**See Also:**

## DNS

Domain Name Service or Server. Since humans find it easier to remember names rather than a 12 digit number, we have created names for addresses. The Domain Name Servers keep track of the mapping of names to IP Addresses and provide the number when you put in a 'name', i.e. www.google.com

**Categories:** remote radio

**See Also:** IP address, dynamic DNS

## DQ

Disqualification (DQ) is the disallowal of a contest entry by the sponsor of the contest, for serious rule violations. DQ is a serious step, which can have ramifications for WRTC eligibility and participation in future contests.

**Categories:** log checking and reporting

**See Also:** red card, yellow card

## Dual-CQ

Dual-Cqing (or dueling CQ's) is supported by some contest software in a SO2R environment, where a CQ is called alternatively on each radio (typically on separate bands). It adds complexity, but can increase your transmitted presence and has led to significant score increases for some top competitors.. Some have labelled this operating technique with the more complicated moniker "2BSIQ," which stands for Two Band Synchronized Interleaved QSOs.

**Categories:** operating technique, operating software/hardware,

**See Also:**

## Dummy CQ

A dummy CQ is a CQ sent out by a SO2R station as a means of holding a frequency (e.g., discouraging others who might start Cqing themselves). Although it sounds just like any ordinary CQ, in a dummy CQ scenario the SO2R station is not prepared to answer responding stations until his/her QSO on the other radio is completed.

**Categories:** operating technique, operating software/hardware,

**See Also:** SO2R, dual-CQ

## Dupe

A dupe is a second contact with a station that does not count for additional points. Most contest software will inform you whether or not a station is a "dupe" so you don't waste time working it.

**Categories:** log checking and reporting

**See Also:**

## Dynamic DNS service

This is a service provided to keep track of your current Dynamic IP address. Since your IP address can change at any time, it's easiest to come up with a name, then have the system keep track of your current IP number. The largest is [www.dyn.com](http://www.dyn.com) – and your router will have an option to communicate with it.

**Categories:** remote radio

**See Also:** IP address, router, DNS

## Dynamic IP address

Your ISP provides your IP Address on a random basis. As the pool of numbers is limited, they recycle them. This number is assigned to your internet Modem or Router.

**Categories:** remote radio

**See Also:** ISP, IP address, router, fixed IP address

## ESM Mode

Enter Sends Message mode. A concept for logging software that uses the Enter key on the keyboard to accomplish multiple tasks, depending on the context. While this is implemented differently in specific software, the general concept allows the user to press the Enter key at different stages to, say, start a CQ message, respond to a call by sending the exchange, or send one's own call, depending on the context in which the key is pressed. If a program does not enable ESM mode, then pressing a specific key always produces the same result.

**Categories:** operating software/hardware

**See Also:**

## Exchange

The information that is passed between stations in a contest (in addition to the call sign). In the CQ WW, for example, the exchange is RST and the two digit CQ zone number.

**Categories:** contest specific concept, operating software/hardware,

**See Also:**

## Firmware

Computer code that controls a device. The code is generally resident in a chip, and can be updated using whatever communications protocols are set up for this purpose. Many contesting devices are now microprocessor controlled, and the ability to update firmware (generally made available by the manufacturer but sometimes customizable by the user) can greatly add to the capabilities and functionality of the device. The Elecraft K3 transceiver, for example, has a rich and vibrant community developing new firmware to improve its operation.

**Categories:** station hardware

**See Also:**

## Fishing Boats

Refers to the SSB QRM found in the CW segment of the HF bands (especially 40 meters) caused by the unlicensed, illegal activity centered in southeast Asia thought to be prevalent among fishing boats in the region.

**Categories:** general

**See Also:**

## Fixed IP Address

For an extra fee, you may be able to have your IP Address not change. This makes connecting to your device easier since it's number never changes.

**Categories:** remote radio

**See Also:** IP address

## Flutter

A propagation phenomenon that is characterized by very rapid QSB (fading signal strength), often accompanied by Doppler shift in frequency, which can produce a warbling tone on CW. Signals displaying flutter are most often associated with paths that travel close to or through the auroral zones around each pole of the globe, but during periods of high auroral disturbances flutter can affect almost all signals. For this reason the presence of flutter on a signal gives a useful clue for the callsign of a (possibly weak) station.

**Categories:** general, operating technique

**See Also:**

## FSK

Frequency Shift Keying is a RTTY mode where the transmitter is keyed directly, similar to CW.

**Categories:** general

**See Also:**

## FT8

One of the more recently developed (and rapidly evolving) digital communications modes that have exploded in popularity for both HF and VHF. While not yet a contest mode, its increasing use makes it only a matter of time before competition is implemented. Has its origins in the extremely weak signal mode WSJT originally designed by Joe Taylor, K1JT, for use with exotic propagation modes such as moonbounce. Has the ability to "read" – the human ear is not involved – signals at lower signal to noise ratios than many humans can detect using CW or SSB.

**Categories:** general

**See Also:**

## **Gab**

Gab is a feature of many contest software packages that allows computers setup at different operating positions in a multi-operator station to send and receive messages at the keyboard to/from each other.

**Categories:** operating software/hardware

**See Also:**

## **Gab file**

Gab file is the record of gab messages recorded by the software during the contest.

**Categories:** operating software/hardware

**See Also:**

## **Gas**

A derogatory term that refers to running more transmitter power than is allowed by the terms of your radio license. Some contests (e.g., the CQ WW) limit transmitter power to a maximum of 1500W output no matter what the rules for one's country say.

**Categories:** ethics

**See Also:**

## **Golden Log**

A log which survives the contest sponsor's log checking process with zero errors and no change to its claimed score. A golden log is the mark of a careful and skillful operator.

**Categories:** log checking and reporting

**See Also:**

## **Gray Line**

The gray line, or daylight/darkness terminator, is a constantly moving circle around the earth where a daylight/darkness transition is taking place. When this circle is over your QTH, potentially enhanced propagation along the terminator is possible, especially on lower frequencies. The timing and potential for gray line propagation depend on a number of predictable (season of the year) and unpredictable (solar conditions) factors. Gray line QSO's can produce new multipliers and/or memorable contest experiences.

**Categories:** general, operating technique

**See Also:** long path

## **Grid Square**

An alphanumeric geographical coordinate system, based on the Maidenhead Locator System developed by VHF enthusiasts in 1980, in which the entire globe is divided into equal-sized rectangles which are denoted by alphanumeric codes. E.g., the four digit grid square for N9RV (western Montana) is DN36. Four (or more) digit grid squares have found increasing popularity as contest exchanges, particularly for VHF contests, as they offer both an increased challenge for successfully completing contest QSOs with accuracy, as well as giving universal location information for all countries/states.

**Categories:** contest specific concept

**See Also:** exchange, [http://en.wikipedia.org/wiki/Maidenhead\\_Locator\\_System](http://en.wikipedia.org/wiki/Maidenhead_Locator_System)

## **Great Circle**

The bearing between two points on the globe which minimizes the physical distance is known as a great circle bearing. Thus the great circle bearing for working, say, India from the central U.S. is approximately due north. Great circle bearings can vary considerably from what might be suggested from the Mercator projection maps posted in most grade schools. During most openings on HF, great circle bearings are optimal for directional antennas. Long path (180 degrees different) or skew path (aiming towards the equator) are less frequent, but sometimes better, strategies for aiming antennas.

**Categories:** general

**See Also:**

### **IP address**

The Internet Protocol uses numbers as addresses to find machines on the internet. It is analogous to a telephone number

**Categories:** remote radio

**See Also:** UDP, IP address

### **ISP**

Internet Service Provider. This is the company that provides your connection to the internet.

**Categories:** remote radio

**See Also:** IP address

### **Jitter**

This is the change of the latency over time. It is a particular problem on radio remote control, as the difference in latency can make it difficult to adjust the system which has settings to account for latency. If it changes a lot, you will probably experience some audio dropouts.

**Categories:** remote radio

**See Also:** Latency

### **K3**

A popular HF transceiver available from Elecraft that is used by many contesters.

**Categories:** station hardware

**See Also:**

### **Keyboard focus**

An attribute of contest software that controls more than one radio at a time. Keyboard focus is the particular radio that your keyboard is entering information for. This is the “active radio” for purposes of logging. If the software is well designed, keyboard focus will flow naturally between radios as the situation requires. In a two radio situation where radio 1 is on 40 meters and radio 2 is on 20 meters, while your radio 2 is CQing your keyboard focus should probably be on radio 1, and vice versa.

**Categories:** operating software/hardware

**See Also:** SO2R

### **LAN**

Local Area Network. This refers to any device that is attached to your router, in your home system. Via wired or wireless connections, that is your local network

**Categories:** remote radio

**See Also:** Router, WAN

### **Latency**

All of this travel between 2 machines over the internet takes time, and the time delay in internet parlance is referred to as latency

**Categories:** remote radio

**See Also:** WAN



## LCR

An acronym for Log Checking Report. A report from the contest sponsor to each individual competitor that details the scoring adjustments to their submitted contest log, reflecting dupes, busted calls, NIL's and other errors. The LCR is very useful as a means of improving your accuracy in future contests.

**Categories:** general, ethics,

**See Also:** bust, dupe, NIL

## Lid

A lid, generally, is someone whose operating behavior shows a lack of awareness, competence or consideration for other amateurs.

**Categories:** general, ethics,

**See Also:**

## Lockout

A means of preventing two transmitters from keying or transmitting simultaneously. A hardware lockout accomplishes this task by inhibiting the transmit/key line on the different radios with a lockout circuit. A software lockout does the same thing using software. This prevents the station from violating the rules of the contest. E.g., it could prevent a multi/multi station from having more than one transmitted signal on the same band, or it might prevent a single operator station from transmitting simultaneously on multiple bands.

**Categories:** operating software/hardware, ethics

**See Also:**

## Long Path

A situation where HF propagation exists between two stations in the inverse direction of the great circle heading. "Beaming long path" means pointing your antenna 180 degrees different from the "short path," or great circle heading, for a particular station. Long path propagation, for example, might allow a North Carolina station to work a station in Hong Kong on 10 meters in the morning by beaming southeast. Depending on the season of the year and the propagation on any particular day, this can be an extremely effective event in a DX contest, allowing for long distance QSOs not possible during short path openings. Gray line QSOs, for instance, are frequently long path. Learning and checking the long path openings, in terms of times, bands and geographies, from your QTH can be very valuable for increasing your multipliers and contest scores in DX contests.

**Categories:** general, operating technique

**See Also:** gray line, skew path

## M2

Shorthand for the multi-operator, two-transmitter category offered in some contests. This is a relatively new category that was intended to allow greater flexibility than older single transmitter categories, but with less hardware requirements than the open ended multi transmitter category.

**Categories:** operating classification

**See Also:** MS, MM

## Master.dta

The master.dta, or "master database" file is a collection of so-called "known good calls" -- e.g., call signs of stations that have been worked in previous contests. It can be used as an operating aid with most contest software to suggest complete calls when only partial information is copied over the air.

**Categories:** operating software/hardware

**See Also:**

## MM

The multi-operator, multi-transmitter category involves an unlimited number of operators and transmitters, with only one transmitted signal allowed per band.

**Categories:** operating classification

**See Also:** M2, MS

## Moving Multipliers

An operating technique where one asks over the air for a station who is a multiplier (e.g., a new country, state or section) to move (QSY) to a different band so that an additional multiplier can be added to one's score. To be done successfully, there must be propagation between the stations on the new band, and the asking station must be able to move quickly. It is not good contest etiquette to ask a CQ-ing station with a pileup to move bands, but even rare DX that comes back to your own CQ's is fair game for this technique. For contests like SS and WPX that only count multipliers once (instead of once per band) this does not apply.

**Categories:** operating technique

**See Also:**

## MS

The multi-operator, single-transmitter category found in many contests has evolved to have different definitions in individual contests. Once understood as a "one transmitted signal" category, its exceptions and specific band change rules make it among the most complex, yet most popular, categories.

**Categories:** operating classification

**See Also:** 10-minute rule, band change rule

## Mult

Most, but not all, contests compute the final score as the product of (i) QSO points and (ii) a tally of zones, countries, prefixes or other unique characteristics. Since they impact the score multiplicatively, this second item is called the multiplier. For example, in the SS contest, the multiplier is the number of unique ARRL sections worked (maximum of 80). Thus when a new (e.g., unique) section is worked, it has a greater impact on the final

**Categories:** contest specific concept, operating technique,

**See Also:**

## Mult station

The station in a multi-transmitter environment that is working only multipliers -- new countries, zones, or prefixes, depending on the contest. This usually entails tuning and answering others who are calling CQ.

**Categories:** contest specific concept

**See Also:** S&P, Run station

## Multiplier

See the discussion under mult above.

## Multiplier Bell

A frequently used motivational device for multioperator contests. The sound of a bell going off in a room of operators when a new multiplier is worked by one of them manning different radios is familiar to many successful multi-operator stations.

**Categories:** operating technique

**See Also:**

## NCJ

National Contest Journal. A bi-monthly magazine devoted to contesting published by the ARRL. NCJ was originally begun by a group of independent contesters (the first editor was KOTO) in the 1970s, and is responsible for the introduction and growth of the popular Sprint and North American QSO Party contests.

**Categories:** general

**See Also:** sprint

## **NIL**

Not-in-log. A deduction made by the contest sponsor that refers to the situation where a contact claimed by one station is not confirmed by a record in the second station's log. In most cases an NIL results for you when there is nothing even "close" to your call in the other station's log at the time you claimed the contact.

**Categories:** log checking and reporting

**See Also:**

## **Off-by-1**

A "one off" call is a call that differs by one character -- W9RV, N7RV, and N9RE are all one off calls for N9RV.

**Categories:** log checking and reporting

**See Also:** SCP

## **Over the Horizon (OTH) Radar**

High power radar systems deployed in the HF spectrum that can cause broadband, intense interference to contest and other communications. Recently OTH radar QRM has been particularly bad on 40 meters, and occurs when there is propagation over the north pole.

**Categories:** general

**See Also:**

## **Off-time**

Off-time is the amount of time during the contest period that a station is off the air -- no listening or transmitting taking place. Some contests (e.g., Worked All Europe, ARRL SS) require that single operator entrants take a minimum amount of off time. Off time lengths are usually restricted to a minimum block size (30 minutes in SS, for example).

**Categories:** contest specific concept, operating technique,

**See Also:** Rubber clocking

## **Online scoreboard**

A web site that delivers real-time score information of participants in a contest, such as those at cqcontest.net . In most cases these scoreboards are designed to seamlessly interface with contest software at participating stations so that one can see at a glance the relative standings of the competitors in any category. Participation in live scoreboards is gaining popularity, but some have questioned whether or not the use of such information during a contest is consistent with unassisted operation.

**Categories:** operating hardware/software

**See Also:** unassisted

## **Packet**

Packet originally referred to packet radio spotting networks, which were an application of (typically) VHF packet radio networks that were created in the late 1980's as a means of exchanging real-time spot information during contests. The rise of high speed internet since that time has caused almost all of these networks to migrate to the net, greatly increasing their speed and scope. Although no real connection to packet radio networks still exists, the term "packet" has survived, referring to spotting networks in general

**Categories:** operating software/hardware, operating technique

**See Also:** spot

## **Panadaptor**

A band scope that displays signals on a band visually, usually as a line or area graph, allowing for a view of activity across an entire band at once. The display show signal strength on the vertical axis and frequency on the horizontal, and is sometimes combined with a waterfall display which presents a brief historical view of activity on a frequency instead of an instantaneous view. This can be a stand alone piece of hardware, integrated into a radio, or software produced by a product like a skimmer.

**Categories:** contesting hardware/software

**See Also:** skimmer

## Partial

Partial calls are bits and pieces of full callsigns. They contain valuable information but cannot be logged until they are complete.

**Categories:** operating software/hardware, operating technique,

**See Also:** SCP, Super Check

## Pass

Passing is an action where a station worked on one band is requested to QSY to a second band, typically in order to obtain additional multiplier credit. Proper contest etiquette holds that only stations who respond to your CQ can be passed -- it is not good manners to ask a station who has established his or her own running frequency to QSY to another band.

**Categories:** operating technique, operating software/hardware,

**See Also:**

## Penalty

Penalties are additional deductions made for unverified or inaccurate information submitted as part of one's claimed score. For example, a NIL in the ARRL SS contest results in the loss of the claimed QSO as well as an additional penalty QSO deducted. Penalties and other score reductions are incurred by all contest competitors, both new and experienced, and are generally nothing to be ashamed or fearful of. Part of contest competition is acquiring operating habits that minimize these deductions.

**Categories:** log checking and reporting

**See Also:**

## Phasing

Refers to the relationship between the waveforms of two signals, typically of equal frequency. In-phase, or zero degree phasing, refers to waveforms that are exactly coincident. Out-of-phase, or 180 degree phasing is where the high point of one signal occurs at the low point of a second signal's cycle. Used as a verb, this generally refers to methods or hardware of adjusting the phase, often with transmit or receive antenna systems. "Phased" verticals, for instance, are antennas that use delay lines or other methods to adjust the phase relationship between the antennas to optimize their directivity and performance.

**Categories:** station hardware

**See Also:** stack, yagi, receive antenna

## Pileup

Multiple stations calling a CQing station at the same time. Modest pileups are concentrated on a single frequency. Rare DX might result in a pileup that is spread out across multiple frequencies. The skill of picking calls out of a pileup, or alternatively, successfully breaking through a pileup to get a CQing station to respond to your call, is a critical contest skill.

**Categories:** operating technique

**See Also:**

## Poaching

Poaching is when a third station strays onto the frequency of a station who is running in order to make contact with one of the responding stations. If N9RV is running stations on 14024, say, and you attempt to call one of the stations that he has just worked, you are poaching. As the term implies, this is aggressive and unethical contest

**Categories:** operating technique, operating software/hardware, ethics

**See Also:**

## Point and shoot

Also known as point and click. A refinement of the search and pounce operating method which is supported by most major logging software programs. With this method, the operator clicks on calls presented in a window on the monitor, so that the frequency of the radio is immediately changed to the frequency of the call which is listed. Thus one may quickly hop around the band, each time landing on the frequency of a CQing station who can be called. The technique is only allowed for operating categories which allow access to packet/internet spotting networks. The technique, while very attractive, has two major difficulties: (i) calls which are spotted may be incorrect – unless one independently verifies the call one runs a very high risk of incurring penalties for busted QSOs, and (ii) when dozens or hundreds of stations in a contest use this technique simultaneously, it results in big pileups calling on exactly the same frequency, which are hard for CQing stations to disentangle.

**Categories:** operating technique, operating hardware/software

**See Also:** S&P, spot, bust, skimmer

## Points per q

The number of QSO points that any particular contest contact contributes. In some contests, for example the NA Sprint or ARRL SS, the points per QSO is constant. Most DX contests employ points per q rules that give more credit for contacts outside your continent. Some give zero points for contacts within your own country.

**Categories:** contest specific concept, operating technique,

**See Also:**

## Prec

Part of the exchange in the ARRL SS contest. It consists of a single letter, once solely based upon your transmitter power: Q = 5 watts or lower, A = 5-100 watts, B = more than 100 watts. Recently additional Prec's were added for multi-operator and assisted categories. See rules for ARRL SS contest.

**Categories:** contest specific concept

**See Also:** Exchange

## Port

All internet traffic travels to the IP address of your home, which all comes to your router. Once it arrives, it has to 'announce' what type of service it is for... some is for a Web Page, another type is for VOIP, or control of a device such as a remote radio setup. Each type of service has been assigned a 'number' which gets sent to the device that is handling the particular service of the packet. The word 'port' has been given to this 'service type'.

**Categories:** remote radio

**See Also:** IP address, Router, VOIP

## Port forwarding

Once a piece of traffic arrives at your router, it may or may not need to be 'forwarded' to a particular device on your LAN, the devices in your home. For REMOTE CONTROL, this will be a particular PC or Device, such as a RemoteRig box. The router needs instructions on where to send a 'packet' depending on which device on your LAN is handling that 'Port'.

**Categories:** remote radio

**See Also:** Router, LAN, TCP/IP, Port

## Prefill

Prefill refers to the features of some software packages which automatically fill in exchange information based upon information obtained either before or during the contest. Prefill software might enter "Pat" in the name field for the NA Sprint, for example, if you work N9RV, either based upon previous contests, or based on working N9RV on a different band in the current contest. If the prefill information is different from what the station actually changes, of course, it is up to the operator to manually correct it.

**Categories:** operating software/hardware, operating technique,

**See Also:** Exchange

## **Prefix**

The portion of a callsign that contains the beginning of the all, up to, and including, the number. The prefix of N9RV is N9. The prefix of 3DA0X is 3DA0. Prefixes count as multipliers in some contests – e.g., the WPX contest. In most cases, prefixes also reveal the geographical location of the station as well.

**Categories:** general

**See Also:**

## **QRP**

QRP in contesting is generally where one's maximum output power is no more than 5 watts. In many contests, power is an overlay category. E.g., you can be QRP and SOAB.

**Categories:** operating classification

**See Also:**

## **Q-signals**

A three letter code beginning with the letter Q. In theory, each code has a slightly different meaning when used with a ? appended. ARRL and other groups publish the codes and their text meaning. In contesting only a few of these codes are used, sometimes in ways that have evolved from their "official" meaning.

**Categories:** general

**See Also:**

## **Qso b4**

QSO b4 is the CW message sent to tell responding stations that they have been worked for point credit previously in the contest and no second QSO is necessary/desirable.

**Categories:** operating technique

**See Also:** Dupe

## **Rate**

Rate refers to the speed of making contest QSOs. It is typically measured in QSOs per hour, even when the time span referred to is longer or shorter than 60 minutes. E.g., if N9RV's 10 minute rate is 70.4, it means that if he continued to make QSOs at the same rate for 60 minutes as he just made in the last 10, he would have 70.4 QSOs in the log. The rate statistics provided by most contest software give valuable information on operating

**Categories:** operating technique, operating software/hardware,

**See Also:**

## **RBN**

Reverse Beacon Network is a internet-based network of dedicated wide band receivers around the world which decode CW signals in real time and generate "spots" which contain frequency, signal strength and other information. The effect is that of a traditional beacon in reverse – instead of checking propagation by tuning one's receiver to a transmitting beacon at a particular frequency, one merely transmits (usually by calling CQ on CW) while connected to a RBN to see which of the receivers on the network hears you.

**Categories:** operating software/hardware

**See Also:** spot, skimmer, skimmer network, beacon

## **RDF**

Receiving Directivity Factor is a measure of receiving antenna performance which compares the forward gain of an antenna at the desired azimuth and elevation grade to its average gain over the entire hemisphere (thanks W3LPL for this definition).

**Categories:** station hardware

**See Also:** receive antenna, receive diversity

## Receive Antenna

Generally refers to an antenna that is used for receive purposes only – e.g., not the same as the transmitting antenna. These include specialized antennas, such as loops, short verticals, pennants or beverages. Receive antennas can be used singly or in combination – e.g., fed into separate receivers simultaneously – the latter is used for what is known as diversity reception. Most modern receivers allow for this. Receive antennas are often non-resonant, and are of particular advantage on lower frequencies to improve directivity and the signal to noise ratio.

**Categories:** station hardware

**See Also:** 4-square

## Receive Diversity

The practice of using two antennas, each feeding a separate receiver locked onto the same frequency, to better capture a weak signal. This frequently is an advantage due to the differences in polarization, wave angle, noise susceptibility and other characteristics of propagation at any time. Receive diversity is especially important on the low bands where signal to noise ratios are low. Common practice feeds the audio from each receiver into a separate ear.

**Categories:** station hardware

**See Also:** receive antenna, RDF

## Reflector

When referring to an antenna, or specifically, a yagi or quad antenna, the reflector is the parasitic (e.g., not fed with coax) element of the antenna that lies behind (opposite the side of maximum radiation) the driven element (the one that receives power directly from the transmitter). The reflector can also refer to an internet-based repository of contest-related postings that contesters have used for decades to exchange information and stories. When people refer to the “contest reflector,” they generally refer to the service hosted at the web site [www.contesting.com](http://www.contesting.com). The term reflector is used because email from contributors is “reflected” to the many subscribers by software at the site.

**Categories:** station hardware, ethics

**See Also:** remote receiver

## Remote Operation

This generally describes a situation where the physical location of the transmitter/receiver is different from that of the controlling operator. This can be supported by software that allows receiver audio and other information to be sent to a remote computer (possibly located thousands of miles away) that also controls transmit, rotor, and other station functions. Contest and DX rules are still evolving on the validity of this configuration. Most seem to allow remote operation as long as the transmitters and antennas are in a single physical location.

**Categories:** station hardware, ethics

**See Also:** remote receiver

## Remote Receiver

A receiver that is remote (e.g., not at the physical location of the station/transmitter) that is accessed using the internet. The ease with which remote receivers can be accessed (many are open to the public) has grown rapidly, creating opportunities for both entertainment (“I wonder what I sound like in Europe”) as well as cheating (“it would be nice to be able to figure out who’s calling me”). Remote receivers are not allowed in most contests. Exceptions are certain categories of the Stew Perry and CQ 160 contests, which place limits on how far away they can be located from the main station.

**Categories:** station hardware, ethics

**See Also:** remote operation

## Robot

The contest robot, or simply “robot,” refers to the automated process that examines contest logs that are submitted to contest sponsors (either via email or a web page) for proper syntax and formatting. Most contest robots will “bounce,” or reject with error messages, logs which fail to conform to the proper Cabrillo format, fail to include required information, or which contain other errors.

**Categories:** log checking and reporting

**See Also:** Cabrillo

## Router

The internet works by sending 'packets' across the house or around the world using 'routes'. It hands off a packet with a destination address to its nearest 'neighbor' router, and it then has instructions of how to reach the destination. Sometimes there can be a dozen or more 'routers' involved in reaching the ultimate destination.

**Categories:** remote radio

**See Also:** WAN, TCP/IP

## Rover

A rover is a mobile station that travels during a contest to activate multiple geographic locations (typically grid squares) during the course of a contest. Rover stations are especially common in VHF contests, and often involve sophisticated setups that can activate multiple bands as well as high profile (elevation) locations. Rovers can make the contest more fun for everyone by making more multipliers available and thus adding to contest scores. The so-called "captive" rover refers to a rover whose express purpose is to work only a single competitor. The ethics of this variant to the rover concept is dubious at best.

**Categories:** operating classification, ethics

**See Also:**

## Rubber Clocking

A slang term used to refer to the adjusting of times in the contest log to make QSOs appear to conform to the rules of a category and contest. This includes, for example, to make reported off-times in time-limited contests such as the ARRL SS conform to rules that require them to be at least 30 minutes in length, or making times of QSOs appear to obey the 10-minute rule for multi-operator categories in DX contests. Such changes are unethical and not allowed by contest rules and are grounds for disqualification.

**Categories:** ethics, log checking and reporting, contest specific concept

**See Also:** DQ, 10-minute rule

## Run

Running refers to staying on one frequency and calling CQ to solicit new contacts. Running may, or may not, be the fastest way to make QSOs and/or build your score at any given time. Whether or not to run is a fundamental decision made during the entire duration of a contest.

**Categories:** operating technique

**See Also:** Run station

## Run station

The station in a multi-transmitter environment that is "running" stations -- e.g., calling CQ and taking all who

**Categories:** contest specific concept

**See Also:** Running

## S&P

Search & Pounce is the operating method where one tunes a band and responds to other stations who are running (e.g., calling CQ). The "traditional" tuning by spinning the receiver knob has been augmented by contest software that allows one to jump instantly to a spot frequency (for categories which allow this) and more recently through the use of panadaptors and other visual displays that allow operators to jump to a frequency based on visual

**Categories:** operating technique

**See Also:** spot, point and shoot

## Schedule

Schedules are advance arrangements to make QSO's with specific stations at specific frequencies and times. Schedules are often made during a contest to try to work additional multipliers on times and frequencies when propagation is favorable. E.g., N9RV may work NH2T on 15 meters at 0100z and set up a schedule for 40 meters on 7030 kHz at 0700z. When 0700z rolls around, if NH2T and N9RV remember to go to 7030 kHz and they hear each other, a new QSO (which may be a new multiplier for one or both) can be made. Schedules made on the air during the contest can be an important and effective contest tactic. Schedules made via non-amateur means (e.g, email) and/or schedules made before the contest starts are not allowed by most contest rules. Even if rules do not explicitly forbid it, such practices are not considered ethical and should be avoided.

**Categories:** operating technique, ethics

**See Also:** mult



## Sec

Abbreviation for ARRL section. Loosely corresponds to US states and Canadian provinces, but larger entities (e.g., NY or California) are divided, resulting in a total of 80 sections. Sections count as multipliers for some ARRL contests.

**Categories:** contest specific concept

**See Also:** Mult

## SDR

Software Defined Receiver. An SDR performs many of the basic functions of a receiver (e.g., mixing, filtering, demodulation) in the digital realm using a personal computer or other dedicated microprocessor device, instead of the analog, special purpose hardware built into conventional receivers. Commercial SDR receivers, both sophisticated and simple/inexpensive, have been available commercially for many years, and their popularity has grown.

**Categories:** station hardware

**See Also:**

## Serial Number

A counter that begins at 1 for the first contest QSO, and increments by 1 for each successive contact. The serial number is part of the exchange for some contests (e.g., the CQ WPX, the Worked All Europe contest).

**Categories:** contest specific concept

**See Also:** Exchange

## Single-Band

Competitors in the single band categories restrict their competitive efforts to one frequency band (e.g., 40 or 20). In some contests they are allowed to make contacts on other bands, but only their "single" band QSOs count towards their score.

**Categories:** operating classification

**See Also:**

## Six-Pack

A six pack is a relay controlled matrix coax switch with two inputs and six outputs. It is used by many stations who use SO2R as a means of allowing either station to have access to any antenna. Newer variants of matrix switches allow for more than six outputs, but the term has stuck.

**Categories:** station hardware

**See Also:**

## Skew Path

A propagation phenomenon where the ionosphere does not support direct-line propagation (along a great circle heading) between two stations, but contacts can be made by aiming closer to the equator (due east or west) so that the path is skewed, so that the first hops travelling in a more southerly direction (for northern hemisphere stations). For a North American station, for example, a skew path opening to Japan might make signals peak due west or even south of west. Skew path openings can take place at frequencies below the MUF, or maximum usable frequency, between two points on the globe, which is often the case under poor propagation conditions. Turning your antenna to explore skew path propagation is a very useful technique that can make a previously inaudible signal suddenly appear and make a QSO possible.

**Categories:** general, operating technique

**See Also:**

## Skimmer

A CW Skimmer is a product developed by VE3NEA which combines a CW code reader with a broadband receiver, providing real time spotting information without the use of a spotting network.

**Categories:** station hardware, operating software/hardware, ethics

**See Also:** skimmer network

### **Skimmer Network**

The global network of internet-connected skimmer stations which continuously copy and post call sign, frequency information and signal strength data for every station they decode (CW and digital modes). The data stream can be used in real time by a variety of applications and contest programs to allow “point and shoot” operating during contests. Note that unassisted categories are not allowed to access skimmer networks.

**Categories:** station hardware, operating software/hardware, operating technique, ethics

**See Also:** skimmer, point and shoot

### **SO1R**

Single operator single radio is not a formal category in most contests, but describes the less complex hardware/software setup where the operator tunes and transmits on one radio at a time.

**Categories:** operating classification, operating technique,

**See Also:**

### **Snow/rain static**

QRN caused by electrically charged precipitation hitting antennas. Low antennas and quads are usually less susceptible than high yagis.

**Categories:** general

**See Also:**

### **SO2R**

Single operator two radio operation involves using audio feeds from two radios simultaneously (but with only one transmitted signal at a time allowed), which enables an operator to tune and listen on a second radio (usually on a second band) while the primary radio is transmitting.

**Categories:** operating classification, operating technique,

**See Also:** Dual-CQ, Dummy CQ

### **SO2R Controller**

A homebrew or commercially made accessory which automates the switching of station peripherals (e.g., headphone audio, key paddle input, microphone) between two radios to enable more effective and efficient two radio operation. These accessories typically integrate with contest software to manage two radio operation as seamlessly as possible.

**Categories:** station hardware, operating software/hardware

**See Also:** SO2R

### **SOA**

Single operator assisted is a single operator category where packet/internet spotting assistance is allowed (see Assisted).

**Categories:** operating classification

**See Also:** Assisted

### **SOAB**

Single operator all band is an operating category common to most contests. In most contests, packet/internet spotting assistance is not allowed, but the WAE and some other contests allow it. Due to the popularity of internet assistance, and the difficulty in detecting the (intentional or unintentional) use of this assistance by contest sponsors judging the results, this situation is changing. This category is sometimes referred to as “SOAB Classic” to reflect its legacy to the pre-spotting era. In all cases a single person is responsible for all operating and logging during the contest.

**Categories:** operating classification

**See Also:**

## **SOHP**

Single operator high power refers to a SOAB, SOA, or SOSB station that runs more than 100 watts output from the transmitter.

**Categories:** operating classification

**See Also:**

## **SOLP**

Single operator low power is a single operator who runs a maximum of 100 watts output.

**Categories:** operating classification

**See Also:**

## **SOQRP**

Single operator QRP stations run a maximum of 5 watts from the transmitter.

**Categories:** operating classification

**See Also:**

## **SOSB**

Single operator single band is a single operator station who operates a single band. It also may mean unassisted, although this is ambiguous.

**Categories:** operating classification

**See Also:**

## **SOU**

Single operator unlimited is used interchangeably with single operator assisted as described above. Unfortunately, both terms "unlimited" and "assisted" have connotations (especially when translated from English) that are inconsistent with their intended meaning. They both are supposed to denote a single operator who receives spotting assistance via packet radio or internet.

**Categories:** operating classification

**See Also:** SOA, Assisted

## **SPG**

Single point ground is a lightning protection practice that physically binds all of the entry wiring into a house/shack to a single ground -- e.g., RF, AC power, water pipes, telephone.

**Categories:** station hardware

**See Also:**

## **Split**

Describes the situation where a CQing station is listening on a frequency that is different from his/her transmit frequency.

**Categories:** operating classification, operating technique,

**See Also:**

## **Sporadic E**

Propagation that utilizes the E layer of the ionosphere. Since this layer is inconsistently ionized and is lower than the F layers that support more reliable HF propagation, such propagation is more rare. When it occurs (usually in the summer months) it can support long distance QSOs especially on 10 and 6 meters.

**Categories:** general

**See Also:**

## Spot

A spot generally refers to a posting of information on the frequency and callsign of a station in the contest, usually received from an internet or packet radio network.

**Categories:** operating software/hardware, operating technique,

**See Also:** Assisted

## Sprint

A short contest that emphasizes frequency agility. The original Sprint contest is the North American Sprint, held in February and September of each year, sponsored by the National Contest Journal. The most unique aspect of Sprint contests is the QSY rule – when a CQing station receives a response, they must QSY and leave the frequency to the calling station at the end of the QSO. Thus sprint contests do not allow the “running” of stations on a single frequency that is characteristic of most other contests.

**Categories:** operating classification, operating technique,

**See Also:**

## Stack

A stack generally refers to two or more yagi antennas which are pointed in the same direction, aligned vertically on a tower or mast, and fed (typically) in phase to increase gain and better control the take-off angle of the antenna system’s forward lobe.

**Categories:** station hardware

**See Also:** Bip/Bop

## SteppIR

A commercially manufacturer yagi which works on multiple bands. The antenna elements consist of hollow fiberglass tubes which support a conductive ribbon that is adjusted in length with microprocessor controlled motors.

**Categories:** station hardware

**See Also:** Yagi

## Stub

Coaxial stubs are specific lengths of coax (generally, but not always, integer multiple of a quarter wavelength on the design frequency) which are used as impedance transformers for matching, attenuation, or other purposes. In a multi-transmitter environment, stubs are frequently used to reduce inter-station interference by nulling harmonics or other kinds of frequency passing/rejection.

**Categories:** station hardware

**See Also:**

## Super check

Super check is another term for super check partial, as described above.

**Categories:** operating software/hardware

**See Also:** SCP

## SWL

A station that only listens and does not transmit. This may be because the operator is not licensed to transmit. There is a long tradition of short wave listening (SWL) enthusiasts who compete for awards in a manner very much like amateur radio.

**Categories:** general

**See Also:**

## TCP/IP

Transmission Control Protocol / Internet Protocol. This is how the internet does what it does. Developed by the Department of Defense in the 1970’s to communicate between defense sites, it has grown into what we call The Internet. It delivers ‘packets’ of information, using an address, from one point on the network to another, which is now worldwide.

**Categories:** remote radio

**See Also:** UDP, IP address

## UBN

An acronym for "unique, bad, not-in-log" which became slang for a log checking report.

**Categories:** log checking and reporting

**See Also:** LCR

## UDP

Uniform Datagram Packet. The type of packet used to control a remote radio and send audio. These provide the fastest transmission time between 2 points. No error correction and highest priority. The other type you will see in nomenclature is TCP. This is an 'error corrected' packet, and one which can take a 'back seat' to other VIP packets. Not good for 'real time' applications.

**Categories:** remote radio

**See Also:** TCP/IP

## Unassisted

Unassisted is the opposite of assisted, in that the use of spotting information delivered from internet or packet radio networks that is allowed in the latter is not allowed. It is a single operator overlay -- most multi-operator categories already allow spotting assistance.

**Categories:** operating classification

**See Also:** assisted, SOA

## Unique

A claimed contact that is unique to all of the submitted logs in a particular contest. Such calls are much more likely to have been incorrectly copied.

**Categories:** log checking and reporting

**See Also:**

## Unique+1

A unique+1 is a call that is (i) "one off" from a unique call and (ii) is a call of someone who was active in the contest. If you claimed contact with N9RU, and no one else in the contest worked N9RU, it is a unique. If N9RV was active in the contest, that is a unique+1. (N9RD might also be a U+1 if he was active).

**Categories:** log checking and reporting

**See Also:**

## Unlimited

Unlimited means the same as assisted -- e.g., spotting network assistance is allowed.

**Categories:** operating classification

**See Also:** Assisted, SOA, SOU

## VOIP

Voice Over Internet Protocol. Audio travels over the internet using this technique.

**Categories:** remote radio

**See Also:** TCP/IP, IP address

## WAN

Wide Area Network. This refers to the network beyond your router, outside of your home. In general, this can be called the internet.

**Categories:** remote radio

**See Also:** Router

## **Waterfall Display**

A useful mode of a panadaptor which gives an animated depiction of band activity over the chosen frequency range. In a waterfall display, received signals show up as solid points at a spot on a horizontal display that indicates their frequency. The pattern of the points gives visual information about what kind of signal it is – e.g., a carrier, a station sending CW or some other mode.

**Categories:** station hardware

**See Also:** Panadaptor

## **WRTC**

World Radio Team Championship. Begun in 1990 at the World Cup Games in Seattle, the WRTC is a unique competition that occurs approximately every four years in July coincident with the IARU contest. WRTC assembles the competitors – two-person teams drawn from the top operators worldwide – in a single physical area, using identical antennas and power levels, to present a more level playing field in the competition. WRTC's have been held on three continents and in five different countries. WRTC 2018 will be held in Germany.

**Categories:** general

**See Also:**

## **WWROF**

The World Wide Radio Operators Foundation is an independent organization committed to supporting radio contesting worldwide.

**Categories:** general

**See Also:**

## **WWYC**

Worldwide Young Contesters. An international, internet-based club of young contesters established in 1999 by a group of young European contesters, which is (sadly) rather dormant at the moment.

**Categories:** general

**See Also:**

## **Yagi**

A directional antenna typically consisting of a dipole element that is directly fed by the transmitter and a number of closely spaced “parasitic,” or indirectly energized, elements which re-radiate RF energy to produce a directional pattern.

**Categories:** station hardware

**See Also:** reflector